University in Belgrade
School of Dental Medicine

Study Programme:

Basic vocational studies
Dental Tehnician Prosthodontist

University in Belgrade
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Study Programme: Basic vocational studies **Dental Tehnician Prosthodontist**

First Year																
No	Code	COURSE	Course type	Compulsory/Elective	1st Semester			2nd Semester			Total No of classes			ESPB
					L	P	Pr-pc*	L	P	Pr-pc*	L	P	Pr-pc*	
1.	3T17ANDE	HUMAN ANATOMY AND DENTAL ANATOMY	ST	C	3	3					45	45		6
2.	ZT17ERGO	ERGONOMICS	ST	C	2	3	8				30	45	120	5
3.	ZT17APAR	INSTRUMENTS AND EQUIPMENT IN A DENTAL LABORATORY	ST	C	2	0					30	0		2
4.	ZT17HIST	ORAL HISTOLOGY	ST	C	2	1					30	15		3
5.	ZT17SMAT	DENTAL MATERIALS	ST	C	2	2	4				30	30	60	4
6.	ZT17BIOM	BIOMECHANICS OF DENTAL AND ORTHODONTIC APPLIANCES	ST	C				1	0		15	0		1
7.	ZT17TOZP	COMPLETE DENTURES	SA	C	2	8	8	0	8	16	30	240	360	13
8.	ZT17FIZL	ORAL PHYSIOLOGY	ST	C				2	1		30	15		4
9.	ZT17GNAT	GNATHOLOGY	ST	C				1	2		15	30		4
10. and 11.	ZT17IZB1	ELECTIVE COURSE 1 (TWO COURSES)		E				4	4		60	60		12
12.	ZT17LSP1	SUMMER PROFESSIONAL PRACTICE 1 20 days in july, 8 hour per day		C									160	6
		TOTAL NUMBER OF CLASSES IN ACTIVE TEACHING PER ACADEMIC YEAR			13	17	20	8	15	16	315	480	700	60
											795			

*Pr-pc: Professional practice

Elective courses – 1st

I1_1	ZT17JAZD	DENTAL PUBLIC HEALTH	ST	E				2	2		30	30		6
I1_2	ZT17MEEN	MEDICAL ECOLOGY	AO	E				2	2		30	30		6
I1_3	ZT17MEPR	LEGAL MEDICINE	AO	E				2	2		30	30		6

Course type: AO- Academical /general educational courses*; ST*- Professional courses*; SA*- Professional/aplicative courses

Second Year																
No	Code	COURSE	Course type	Compulsory/Elective	3rd Semester			4th Semester			Total No of classes			ESPB
					L	P	Pr-pc*	L	P	Pr-pc*	L	P	Pr-pc*	
13.	ZT17ESTE	ESTHETIC DESIGN OF DENTAL RESTORATIONS	SA	C	1	1	3				15	15	45	5
14.	ZT17PARO	PERIODONTICS AND ORAL PATHOLOGY	ST	C	2	1	4				30	15	60	6
15.	ZT17PAPR	PARTIAL REMOVABLE DENTURES	SA	C	1	8	16	1	8	16	30	240	480	17
16.	ZT17INSP	INDIRECT FILLINGS	ST	C				1	2		15	30		5
17.	ZT17ZNRD	SAFETY AT WORK	ST	C				2	0		30	0		3
18.	ZT17ORT1	ORTHODONTIC APPLIANCES 1	SA	C				2	4	4	30	60	60	6
19. and 20.	ZT17IZB2	ELECTIVE COURSES 2 (TWO COURSES)		E	4	2					60	30		12
21.	ZT17LSP2	SUMMER PROFESSIONAL PRACTICE 2 20 DAYS IN JULY, 8 HOUR PER DAY		C									160	6
		TOTAL NUMBER OF CLASSES IN ACTIVE TEACHING PER ACADEMIC YEAR			8	12	23	6	14	20	210	390	805	60
											600			

*Pr-pc: Professional practice

Elective courses – 2nd

I2_1	ZT17MENA	DENTAL SERVICES ORGANIZATION AND MANAGEMENT IN DENTISTRY	SA	E	2	1					30	15		6
I2_2	ZT17ISHR	NUTRITION AND ORAL HEALTH	AO	E	2	1					30	15		6
I2_3	ZT17INFO	INFORMATICS	AO	E	2	1					30	15		6

Course type: AO- Academical /general educational courses*; ST*- Professional courses*; SA*- Professional/aplicative courses

Third year															
No	Code	COURSE	Course type	Compulsory/Elective	5th Semester			6th Semester			Total No of classes			ESPB
					L	P	Pr-pc*	L	P	Pr-pc*	L	P	Pr-pc*	
22.	ZT17ORT2	ORTHODONTIC APPLIANCES 2	SA	C	2	4	4				30	60	60	5
23.	ZT17PRA2	COMPLEX PARTIAL DENTURES	ST	C	1	8	12				15	120	180	9
24.	ZT17NAD1	FIXED RESTORATIONS 1	SA	C	1	8	12				15	120	180	9
25.	ZT17NAD2	FIXED RESTORATIONS 2	SA	C				1	8	12	15	120	180	9
26.	ZT17MAKS	MAXILLOFACIAL PROSTHODONTICS	ST	C				2	2	4	30	30	60	2
27.	ZT17ZNIM	DENTAL RESTORATIONS ON IMPLANTS	ST	C				2	3	4	30	45	60	5
28.	ZT17VTEH	HIGH TECHNOLOGY IN DENTAL LABORATORY CAD/CAM	ST	C				1	3	4	15	45	60	7
29.	ZT17IZB3	ELECTIVE COURSES 3 (ONE COURSE)		E	3	0					45			2
30.	ZT17DIPL	FINAL PROFESSIONAL PAPER	SA	C										10
31.	ZT17LSP3	SUMMER PROFESSIONAL PRACTICE 3 20 DAYS IN JUNY, 8 HOUR PER DAY		C									160	2
		TOTAL NUMBER OF CLASSES IN ACTIVE TEACHING PER ACADEMIC YEAR			7	20	28	6	16	24	195	540	940	60
											735			

*Pr-pc: Professional practice

Elective courses – 3rd

I3_1	ZT17KOMU	ORAL HEALTH PROMOTION AND BASICS OF COMMUNICATIONS	AO	E	3	0					30	0		2
I3_2	ZT17GERO	GERODONTOLOGY	SA	E	3	0					30	0		2

Course type: AO- Academical /general educational courses*; ST*- Professional courses*; SA*- Professional/aplicative courses

Number and structure of classes

Year	Lectures	Practical Sessions	Professional practice
I	315	480	700
II	210	390	805
III	195	540	940
TOTAL	**720**	**1410**	**2445**
Active lessons	**2130**		
TOTAL L/P/Pr-pc	**4575**		

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**	
Level of studies: Basic vocational studies – 1st level	
Course: Human anatomy and dental anatomy	
Professor in charge (Name, middle initial letter, surname): Goran B. Vujaskovic	
Course status (compulsory/elective): Compulsory	
ECTS: 6	**Year of the study: first**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17 ANDE**
Objectives of the course: mastering and accepting basic knowledge in the anatomy of the head and morphology of the permanent dentition	
Outcome of the course : student should be able to model the surfaces of all teeth in wax and mastered the knowledge of the morphological characteristics of each individual tooth as well as knowledge of the anatomy of the oral cavity and orofacial system.	
Content of the course	

Lectures		teacher	No of sessions
1	Introduction in anatomy of Head and Neck	Goran Vujaskovic	3
2	Upper jaw, lower jaw, palatal bone, temporomandibular joint	Goran Vujaskovic	3
3	Masticatory muscles, facial muscles, arteries and veins of the head	Goran Vujaskovic	3
4	Oral cavity, Fifth cranial nerve	Goran Vujaskovic	3
5	Introduction in dental morphology, tooth marking	Rade Zivkovic	3
6	The basic parts of the teeth. Supporting structures of teeth. Tooth families	Rade Zivkovic	3
7	Incisors	Rade Zivkovic	3
8	Canines	Rade Zivkovic	3
9	Premolars	Rade Zivkovic	3
10	Molars in the upper jaw	Rade Zivkovic	3
11	Molars in the lower jaw	Rade Zivkovic	3
12	Atributes of the human dentition	Rade Zivkovic	3
13	Organization of human dentition	Rade Zivkovic	3
14	Dental arch interaction	Rade Zivkovic	3
15	Stomathognathic system	Rade Zivkovic	3
	TOTAL		**45**

Practical sessions/method units and vocationl practice- single work			No of sessions
1	Introduction in anatomy of Head and Neck	Goran Vujaskovic	3
2	Upper jaw, lower jaw, palatal bone, temporomandibular joint	Goran Vujaskovic	3
3	Masticatory muscles, facial muscles, arteries and veins of the head	Goran	3

		Vujaskovic	
4	Oral cavity, Fifth cranial nerve	Goran Vujaskovic	3
5	Modeling the crown of the upper central incisor in wax.	Rade Zivkovic	3
6	Modeling the crown of the lower central incisor in wax.	Rade Zivkovic	3
7	Modeling the crown of the upper canine in wax.	Rade Zivkovic	
8	Modeling the crown of the lower canine in wax.	Rade Zivkovic	3
9	Modeling the crown of the upper first premolar in wax.	Rade Zivkovic	3
10	Modeling the crown of the lower first premolar in wax.	Rade Zivkovic	3
11	Modeling the crown of the lower second premolar in wax.	Rade Zivkovic	3
12	Modeling the crown of the upper first molar in wax.	Rade Zivkovic	3
13	Modeling the crown of the lower first molar in wax.	Rade Zivkovic	3
14	Modeling the crown of the lower second molar in wax.	Rade Zivkovic	3
15	Recapitulation	Rade Zivkovic	3
	TOTAL		**45**

Recommended literature:

1. Martinović Ž. Osnovi dentalne morfologije. II izdanje. Kolor pres, Lapovo, 2000. [I (6-26 str.) , II (31-57 str.) i III poglavlje (58-200 str.)]
2. Martinović Ž, Živković R.: Osnovi dentalne morfologije - praktikum. I izdanje. Beograd 2005. Kolor pres, Lapovo, 2005
3. S. Jovanović, N. Lotrić: Deskriptivna i topografska anatomija čoveka – Osteologija, Medicinska knjiga, Beograd, 1983
4. G. Vujašković, S. Malobabić, D. Mucić: Deskriptivna i topografska anatomija čoveka - Centralni nervni sistem, Sprint, Beograd, 2002

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **45**	Practicals: **45**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	40
Activities at practicals	27	Practical exam	20
Colloquial exams	7	Oral exam	
Seminars	3		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: ERGONOMICS

Professor in charge (Name, middle initial letter, surname): Prof. Vanja V. Petrovic

Course status (compulsory/elective): Compulsory

ECTS: 6	**Year of the study: I**
Entry requirements:(passed exams from the previous years)	**Course code: ZT17ERGO**

Objectives of the course:
Learning the specifics in the work of dentistry from the ergonomic point of view

Outcome of the course

- to recognise and apply ergonomic principles in dental work
- to recognise common risks and symptoms
- to learn preventive and therapeutic measures for the onset of work related diseases in the dental office and other hospital settings

Content of the course

Lectures		teacher	No of sessions
1	Objectives of the course, definition of ergonomics, principles and methods.	Prof. V. Petrovic	2
2	Overall ergonomic principles of the dental office (principles of the work settings in public and private offices and clinics).	Prof. D.Markovic	2
3	Ergonomic principles of the dental laboratory (equipment, work setting, instruments, work positioning)	Prof. I.Stancic	2
4	The therapist's, patient's and assistant's anatomical and physiological aspects of correct positioning.	Prof. V. Petrovic	2
5	Design of the dental equipment and instruments; its impact on neuromuscular load (man's role in designing and evolution of the equipment and instruments).	Prof. V. Petrovic	2
6	Relation of design and anatomy- its impact on the human body; design of work clothes, protective visors and gloves.	Prof. V. Petrovic	2
7	Design of the work place, waiting room and laboratory.	Prof. V. Petrovic	2
8	"Four handed dentistry".	Prof. V. Petrovic	2
9	Hygiene and ergonomics (personal hygiene, hygiene of the surrounding workplace, equipment and instruments, disinfection and sterilisation.	Prof. V. Petrovic	2
10	Epidemiology of incorrect work positioning and its role in overall health from the past to the present.	Prof. D.Markovic	2
11	Dental office computerisation, modern equipment and multimedia.	Assist.prof. I.Radovic	2
12	Ergonomic criteria in infection control and nosocomial infections.	Assist.prof. I.Radovic	2
13	Professional diseases and work related diseases in the dental profession (specifics and characteristics: legal regulations).	Prof. V. Petrovic	2
14	Stress in the dental profession; specifics of the work and interpersonal relations.	Prof. V. Petrovic	2
15	Preventive and therapeutic measures for work related health disorders in dentistry (dental assistants, oral hygienists, dental technicians, therapists).	Prof. V. Petrovic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work		No of sessions	No of sessions
1	The specifics of work in the dental office.	3	8
2	Oral hygiene – means and methods.	3	8
3	Patient admittance and clinical check up; dental history and medical history	3	8
4	Patient admitance; individual preventive approach.	3	8
5	Patient education on the correct methods of oral hygiene according to age and personal oral health risks; applying prophylaxis in the office.	3	8
6	Specifics of the work at the clinic for paediatric and preventive dentistry.	3	8
7	Specifics of the work at the clinic for periodontology and positioning the patient for examination.	3	8
8	Specifics of the work at the clinic for oral surgery and positioning the patient for examination	3	8
9	Specifics of the work at the clinic for prosthetics and positioning the patient for examination.	3	8
10	Specifics of the work at the clinic for orthodontics and positioning the patient for examination.	3	8
11	Specifics of the work at the clinic for endodonthics and positioning the patient for examination	3	8
12	Specifics of the work at the clinic for maxillofacial surgery and positioning the patient for examination.	3	8
13	The specifics of working with handicapped patients and with patients in special care facilities .	3	8
14	The specifics of working with patients in hospitals.	3	8
15	The specifics of working with geriatric patients living in special care facilties.	3	8
	TOTAL	45	120

Recommended literature:

1. Dečja stomatologija, praktikum. D.Beloica i sar.,Stomatološki fakultet Univerziteta u Beogradu, 2010
2. Dental hygiene, Theory and practice, 2nd edition, Darby & Walsh, Saunders
3. Practice dentistry pain free, Betany Walachi, Posturedontics Press 2008.

Total number of classes in active teaching:				Professional practice/independent work: **120**
Lectures: **30**	Practicals: **45**	Other modes of the teaching process:	Study research work:	

Methods of the teaching process: Lectures, practical sessions, group presentations, colloquiums, seminars

Grading of knowledge (maximum number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	15	Written test	60
Activities at practicals	15	Practical exam	
Colloquial exams		Oral exam	
Seminars	10		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: INSTRUMENTS AND EQUIPMENT IN A DENTAL LABORATORY

Professor in charge (Name, middle initial letter, surname): Miodrag Lj. Šćepanović

Course status (compulsory/elective): Compulsory

ECTS:2	**Year of the study: FIRST**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17APAR**

Objectives of the course: Introducing newest technologies and devices in a dental laboratory

Outcome of the course: After this studies student is prepared to recognise and use equipment, devices and technology in a dental laboratory and their maintenance as well

Lectures		teacher	No of sessions
1	Instruments and equipment in a dental laboratory	**M. Šćepanović**	2
2	Maintenance of working and surrounding area	**M. Šćepanović**	2
3	Relation between level of equipment and workflow	**M. Šćepanović**	2
4	Micro-motors, types, instruction manuals and maintenance 1	**M. Šćepanović**	2
5	Micro-motors, types, instruction manuals and maintenance 2	**M. Šćepanović**	2
6	Rotational instruments, grinding efficiency, types, appliance, risks and maintenance	**M. Šćepanović**	2
7	Dental porcelan furnaces	**M. Šćepanović**	2
8	Refractory invesment material	**M. Šćepanović**	2
9	Casting furnaces and maintenance	**M. Šćepanović**	2
10	Sprue casting cutting devices and maintenance	**M. Šćepanović**	2
11	Light curing instruments and maintenance	**M. Šćepanović**	2
12	Thermo-polymerization instrument and maintenance	**M. Šćepanović**	2
13	Electrolytical polishing instruments and maintenance	**M. Šćepanović**	2
14	CAD/CAM systems maintenance	**M. Šćepanović**	2
15	Accessory equipment in dental laboratory and maintenance	**M. Šćepanović**	2
	TOTAL		30

No practical session for this subject

Recommended literature:

Todorović A. Primena CAD/CAM tehnologije u stomatološkoj protetici, Beograd 2005, str. 45-111
Martinović Ž., Tihaček Šojić LJ., Živković R.:Totalna zubna proteza, Autorsko izdanje, Beograd 2015.
Stamenković D. Stomatološka protetika, parcijalne proteze, Interprint,
Beograd, 2006.strana 251-273.
Stamenković D. : Stomatološki materijali,knjiga 3, str. 3-288 DATA STATUS, Beograd, 2015

Total number of classes in active teaching:				Professional practice/independent work: /
Lectures: **30**	Practicals: 0	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar			
Grading of knowledge (maximal number of points 100)			
Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	40	Written test	60
Activities at practicals		Practical exam	
Colloquial exams		Oral exam	
Seminars			
Other			

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**	
Level of studies: Basic vocational studies – 1st level	
Course:ORAL HISTOLOGY	
Professor in charge (Name, middle initial letter, surname): Vesna Z. Danilović	
Course status (compulsory/elective): Compulsory	
ECTS:3	**Year of the study: First**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17HIST**
Objectives of the course: The aim of the course is to inform the student in detail about the structure, function, origin and development of the cells and tissue of the orofacial region, as well as the basic principles of their integration into larger functional units	
Outcome of the course after completing the course the student is able to recognize all the cells, tissues and organs of the orofacial region. He is able to understand the normal structure and function of oral cells and tissues, which creates good prerequisites for later understanding of pathological processes and conditions. The student understands the basic principles of the development process, which allows him to understand the mechanism of developmental anomalies.	

Content of the course

Lectures		teacher	No of sessions
1	Cell as the basic structural and functional unit of the organism. Basic information about cell structure and ways of integration into tissues. The concept of tissue, the basic classification of tissues. Epithelial tissue, concept, origin and types of epithelial tissues.	Doc.dr Sanja Milutinović-Smiljanić	2
2	Connective tissue, general characteristics, significance and origin. Types of connective tissue: loose, adipose, reticular and dense. Embryonic connective tissue. Specialized connective tissue: cartilage (hyaline, elastic, fibrous). Structure, role and development.	Prof.dr Vesna Danilović	2
3	Specialized connective tissues: bone tissue. Structure, role and development. Osteogenesis.	Prof.dr Vesna Danilović	2
4	Blood. Hematopoiesis. Bone marrow. Immune system cells, T and B lymphocytes, their origin, role, differentiation.	Prof.dr Vesna Danilović	2
5	Muscle tissue. Origin, type and significance of muscle tissue. Histological organization of skeletal, smooth and cardiac muscle. Neuromuscular synapse.	Doc.dr Sanja Milutinović-Smiljanić	2
6	Nerve tissue. Basic cytological and histological characteristics of nerve tissue. Neurons and glial cells. Nerve fiber. Synapsis.	Doc.dr Sanja Milutinović-Smiljanić	2
7	Development of face, oral and nasal cavities. Origin, growth and fusion of facial processes. Development of viscerocranium and neurocranium. Development of soft tissue of the face. Developmental anomalies.	Prof.dr Vesna Danilović	2
8	Development and growth of teeth. Dental lamina. Dental follicle. Phases of initiation, proliferation, histodifferentiation and morpho differentiation, phase of apposition and mineralization. Origin, role and differentiation of odontoblasts, ameloblasts and cementoblasts. Dentinogenesis. Amelogenesis. Development of dental pulp. Development of the root of the tooth. Cementogenesis. Eruption and shedding of primary teeth.	Prof.dr Vesna Danilović	2
9	Enamel. Physical and chemical properties of the enamel. Enamel prisms, interprismatic substance. Incremental lines. Enamel matrix. Protein of the enamel matrix. Changes in enamel due to aging.	Doc.dr Sanja Milutinović-Smiljanić	2

	Reparative potential of the enamel.		
10	Dentine-pulp complex. Physical and chemical properties of dentine. Dentine structure. Dentine types: primary and secondary. Reparation of dentine-pulp complex. Tertiary (reparative) dentine. Predentine. Innervation. Sensitivity. Aging. Dental pulp. Structural characteristics by zones. Cells of pulp. Extracellular pulp matrix. Dental pulp vascularization and innervation. Aging of the pulp.	Prof.dr Vesna Danilović	2
11	Periodontium: cement and periodontal ligament. Physical and chemical properties of cement. Cement-enamel junction and cement-dentine junction. Histological characteristics of cement. Classification of cement. Cellular and acellular cement. Cells of cement. Periodontal ligament: cells, fibers, intercellular substance. Innervation, vascularization. Periodontal ligament functions. Regenerative and reparative potential of periodontium.	Doc.dr Sanja Milutinović-Smiljanić	2
12	Periodontium: alveolar bone and gingiva. Alveolar bone: structure and role. The inner wall of the alveola. Anatomical characteristics of the gingiva: attached, free and interdental gingiva. Gingival sulcus. Histological organization of gingiva. Sulcus epithelium. Junctional epithelium. Dentogingival junction. Oral epithelium of gingiva. Gingival connective tissue. Gingival fibers. Gingival vascularization and innervation. The regenerative and reparative potential of the gingiva. Clinical significance.	Prof.dr Vesna Danilović	2
13	Oral mucosa. Oral epithelium. Structural variations and types of oral mucosa. Specialized mucosa. Papillae: circumvallate, foliate, fungiform. Gustatory corpuscles. Non-gustative papillae of the tongue: filiform. Masticatory mucosa: histological characteristics and regional differences. Lining mucosa: histological characteristics and regional differences. Changes in oral mucosa related to aging. Reparation and regeneration of oral mucosa.	Doc.dr Sanja Milutinović-Smiljanić	2
14	The glands of the oral cavity. Development of salivary glands. Histological characteristics of the salivary glands. Secretory part of the salivary gland. Structure of acinus. Types of salivary glands. Serous, mucous and mixed salivary glands. Excretory ducts. Innervation and vascularization of the salivary glands. Changes in the salivary glands associated with aging.	Doc.dr Sanja Milutinović-Smiljanić	2
15	Temporomandibular joint. Maxillary sinus. Anatomical characteristics. Histological characteristics of TM joint. Articular disc. Capsule of the TMJ. Synovial membrane. TMJ ligaments. TMJ innervation and vascularization. Development of TM joint. Changes in the aging joint. Paranasal cavities. Maxillary sinus. Anatomical and histological characteristics. Clinical significance.	Prof.dr Vesna Danilović	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work			
1	Epithelial tissue. Simple and stratified epithelia.	Doc.dr Sanja Milutinović-Smiljanić	1
2	Connective tissues with general properties. Cartilages: hyaline, elastic and fibrous.	Doc.dr Sanja Milutinović-Smiljanić	1
3	Bone: ground section and decalified section. Endesmal and enchondral ossification.	Prof.dr Vesna Danilović	1
4	Blood smear. Bone marrow.	Prof.dr Vesna Danilović	1

5	Muscular tissue: skeletal, smooth and cardiac.	Doc.dr Sanja Milutinović-Smiljanić	1
6	Nerve tissue: nerve cell, nerve fibers. Sensitive corpuscles. Synapsis.	Doc.dr Sanja Milutinović-Smiljanić	1
7	Development of face and oral cavity.	Prof.dr Vesna Danilović	1
8	Development of teeth.	Prof.dr Vesna Danilović	1
9	Enamel.	Doc.dr Sanja Milutinović-Smiljanić	1
10	Dentin-pulp complex.	Doc.dr Sanja Milutinović-Smiljanić	1
11	Cementum. Periodontal ligament.	Prof.dr Vesna Danilović	1
12	Alveolar bone. Gingiva.	Prof.dr Vesna Danilović	1
13	Oral mucosa.	Doc.dr Sanja Milutinović-Smiljanić	1
14	Saivary glands	Doc.dr Sanja Milutinović-Smiljanić	1
15	Temporomandibular joint. Maxillary sinus.	Doc.dr Sanja Milutinović-Smiljanić	1
	TOTAL		15

Recommended literature:

1. **Radujković-Kuburović G**. Opšta histologija za studente Stomatološkog fakulteta. Zavod za udžbenike, Beograd, 2012. (selected chapters: chapter 1. Pp 35-45; 59-62; 64-68; chapter 2. pp 77-88; chapter 3. pp 89-98; chapter 4. pp 101-112.; chapter 5. pp 115-122.; chapter 6. pp 125-132.
2. **Danilović Vesna, Radujković-Kuburović Gordana**. Oralna histologija i embriologija. Zavod za udžbenike, Beograd, 2012. (chapter 7. pp7-17; chapter 8. Pp 18-41; chapter 9. pp 62-68; chapter 10. pp 42-61; chapter 11.pp 69-84; chapter 12. pp 85-95; chapter 13. pp 108-130; chapter 14. pp 96-107; chapter 15. pp 131-135).

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **15**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**	
Level of studies: Basic vocational studies – 1st level	
Course:DENTAL MATERIALS	
Professor in charge (Name, middle initial letter, surname): Vesna B. Medic	
Course status (compulsory/elective): Compulsory	
ECTS:4	**Year of the study:1st**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17SMAT**

Objectives of the course:

- to learn and understand the basic properties of all indirect restorative and auxiliary materials
- to be prepared to analyze the benefits and limitations of these materials,
- to make rational decision on their selection and use in dental-technical laboratories and in clinical practice

Outcome of the course

After mastering the course, the student :

- **knows physical-mechanical, biological and esthetics properties of dental materials**
- **knows manipulations properties of dental materials (mixing time, working time, setting time...)**
- **knows technological procedures in working with dental materials (melting and casting alloys, polymerization rections of acrilic resin and resin composite, ceramic sintering...)**

Content of the course

Lectures		teacher	No of sessions
1	**Standards of dental materials:** EU directives, CE marking, ISO standards, GPC standards, GMP standards **Biocompatibility: concept and significance of biocompatibility** Biocompatibility test,adverse effect from exposure to dental materials, occupational hazards for dental personnel	Prof Kosovka Obradovic - Djuricic	2
2	**Chemical properties of dental materials** 1. Primary and secundary chemical bonds 2. Setting rections: neutralisation, chelatations, polymerization 3. Elektrochemical properties: Electrochemical mechanism of corrosion, galvanic corrosion, tarnish and passivation of metal	Assistant prof Vesna Medic	2
3	**Mechanical properties of dental materials:** 1. Load of dental materials by pressure, tensile, shear… 2. Stresses an strains, stress-strain graph, modulus of elasticity, elastic limit, yield strength	Assistant prof Đorđe Stratimirović	2
4	3. Material properties: brittleness, toughness, hardness, ductility, compresive, flexural, shear and tensile strength, reslience, dental material fatigue	Assistant prof Đorđe Stratimirović	2
5	4. Viscosity, viscoelatic, pseudoplastic and thixotropic behavior creep an flow, stress relaxation 5. Working time and setting time	Assistant prof Đorđe Stratimirović	2
6	**Physical properties of dental materials:** 1. Thermal properties: thermal conductivity,coeficient of thermal expansion, pfase diagram 2. Adhesion, contact angle, wetting 3. Color and optical effects	Assistant prof Đorđe Stratimirović	2
7	**Nonelastic and elastic impression materials:** impression plaster, zinc oxide eugenol impression paste and impression compaund, reversibile	Prof Kosovka Obradovic -	2

	hydrocolloid, irreversibile hydrocolloid (alginate) polisulfide,condensation silicone, addition silicone, polyether	Djuricic	
8	**Die materials :** 1. Dental gipsum products:dental plaster, dental stone, die stone 2. Alternative materials: resin, acrilic resin, electroplated dies **Material for making patterns (wax replica) :** **1.** Dental waxes: pattern wax (inlay, casting, baseplate types), processing (boxing, sticky types)	Assistant prof Vesna Medic	2
9	**Investment materials:**gypsum bonded, phosphate bonded and silicate bonded Setting, hygroscopic and thermal expansion **Dental alloys 1**: metals- properties,crystalline structure, deformation in metals Alloys: requirements of dental casting alloys, solid solution, phase diagram, heat tretment of casting (softening and hardening)	Assistant prof Vesna Medic	2
10	**Dental alloys 2**:clasification of alloys, gold-based alloys, silver-palladium alloys,	Assistant prof Vesna Medic	2
11	**Dental alloys 3:**alloys for metal-ceramic restorations, alloys for removable partial dentures, titanium based alloys, stainless steel alloys, alloys for implants	Assistant prof Vesna Medic	2
12	**Dental ceramics 1:** composition and properties, classification of dental ceramics, ceramic processing method	Prof Kosovka Obradovic - Djuricic	2
13	**Dental ceramics 2:** dental ceramics for metal-ceramic systems, dental ceramics for all ceramic restorations , CAD-CAM milling ceramics	Prof Kosovka Obradovic - Djuricic	2
14	**Prosthetic polymers**: denture base polymers (acrilic resin) Heat,chemically(autopolymerizing), light and microwave activated polymerization, Composition, properties, polymerization, polimer to monomer ratio. Relining resin, permanent and temporary soft lining materials,	Assistant prof Vesna Medic	2
15	**Materials for cutting, grinding and polishing**, abrasive instrument design, types of abrasives **Laboratory (proshetic)resin based composites**	Assistant prof Vesna Medic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work		No of practical sessions	No of vocational practice
1	Impression materials	2	4
2	Die materials	2	4
3	Material for making patterns (wax replica)	2	4
4	Material for making patterns (wax replica)	2	4
5	Gypsum bonded investment materials:	2	4
6	Phosphate bonded investment materials:	2	4
7	Prosthetic polymers	2	4
8	Prosthetic polymers	2	4
9	Dental alloys 1	2	4
10	Dental alloys 2	2	4
11	Dental alloys 3	2	4
12	Dental ceramics1	2	4

13	Dental ceramics2	2	4
14	Dental ceramics3	2	4
15	Materials for cutting, grinding and polishing,	2	4
	TOTAL	30	60

Recommended literature:

1. Stamenkovic D, Dental Materials, book 3, pages:3-288, DATA STATUS,Belgrade , 2015
2. Stamenkovic D, Obradovic- Djuric K, Ivanovic V, Vulicevic Z, Markovic D, Raic K, Pavlovic G, Popovic G, Velickovic S: Dental Materials, book 1, pages: 326-355, School of Dental Medicine, Belgrade, 2009

Total number of classes in active teaching:				Professional practice/independent work: **60**
Lectures: **30**	Practicals: **30**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: BIOMECHANICS OF DENTAL AND ORTHODONTIC APPLIANCES

Professor in charge (Name, middle initial letter, surname): Aleksandra M Milić Lemić

Course status (compulsory/elective): Compulsory

ECTS: 1	**Year of the study: First**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17BIOM**

Objectives of the course:
that the student understands the occlusal and other forces and their effects on supporting tissues, understands the sum of the forces and force moments. Also to be able to know when designing and making dental restorations and apparatus to predict the effect of forces on the teeth, periodontal and other supporting tissues.

Outcome of the course
After finishing classes, students are able to:
- fully understand the principles of force action actingperformed by dental restorations as well as forces from orthodontic appliances that work on the teeth and jaw bone,
- independently plans dental restorations and orthodontic devices, taking into account the forces and moments of force in the orofacial region

Content of the course

Lectures		teacher	No of sessions
1	Introducing biomechanics in dental restorations and orthodontic apparatus	Prof Aleksandra Milić	1
2	Basics of mechanics I	Prof Djordje Stratimirović	1
3	Basics of mechanics II	Prof Djordje Stratimirović	1
4	Statics I	Prof Djordje Stratimirović	1
5	Statics II	Prof Djordje Stratimirović	1
6	Bioemchanics of complete denture	Prof Aleksandra Milić	1
7	Biomechanics of free-end saddle	Prof Aleksandra Milić	1
8	Biomechanics of precise attachments	Prof Aleksandra Milić	1
9	Biomechanics of double crowns	Prof Aleksandra Milić	1
10	Biomechanics of dental bridges	Prof Aleksandra Milić	1
11	Biomechanics of implants	Prof Aleksandra Milić	1
12	Biomechanics of implant suprastructure and restorations	Prof Aleksandra Milić	1
13	Biomechanics of mobile and fixed orthodontic appliances	Prof Predrag Nikolić	1
14	Biomechanics of tooth movement	Prof Predrag Nikolić	1
15	**Coloqium**	Prof Aleksandra Milić	1
	TOTAL		15

Recommended literature:
»Dental Biomechanics« editor Arturo N Natali. 20003 Taylor & Francis. London

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **15**	Practicals: **0**	Other modes of teaching process:	Study research work:	**/**

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)			
Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: COMPLETE DENTURES

Professor in charge (Name, middle initial letter, surname): Rade S. Zivkovic

Course status (compulsory/elective): Compulsory

ECTS: 13	**Year of the study: first**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17 TOZP**

Objectives of the course:
to enable the student to independently produce all stages of a complete dentures in dental laboratory

Outcome of the course :
After finishing the course, the student is able to: create a working model, individual tray, bite patterns, teeth, and dental acrylic complete dentures.

Content of the course

Lectures		teacher	No of sessions
1	Complete denture – CD (definition, parts, types). Impression for CD,(Definition, Types)	Rade Zivkovic	2
2	Fabrication of individual trays - IT	Rade Zivkovic	2
3	Functional impression - FI	Rade Zivkovic	2
4	Preparation of functional impression for producing the master model	Rade Zivkovic	2
5	Fabrication of bite wax pattern for complete dentures in upper and lower jaw	Rade Zivkovic	2
6	Interocclusal bite registration in edentuolus patients	Rade Zivkovic	2
7	Articulaters and their use in producing complete dentures	Rade Zivkovic	2
8	Artificial teeth set up	Rade Zivkovic	2
9	Preliminary determination of the position of the frontal artificial teeth (I skeleton class).	Rade Zivkovic	2
10	Selection and determination of the position of lateral artificial teeth.	Rade Zivkovic	2
11	Skeletal attitude of the jaws and the position of artificial teeth (eugnathia, distooclusion, mesiooclusion)	Rade Zivkovic	2
12	Registration the eccentric positions of the mandible and adjusting the inclination of the condyle paths on the articulator using position registers of the lower jaw; Basic principles of balanced occlusion in complete dentures.	Rade Zivkovic	2
13	Final laboratory procedures in fabrication of complete dentures.	Rade Zivkovic	2
14	Fabrication of occlusal bite appliance.	Rade Zivkovic	2
15	Alternative therapeutic procedures in edentuolus patients: CD with metal base, immediate complete denture, supradental CD, Complete denture retained on telescopic crowns, CD retaind by dental attachments, implant retained complete denture**.**	Rade Zivkovic	2
	TOTAL		**30**

Practical sessions/method units and vocationl practice- single work		8	8
1	Anatomical impression (pouring the impressionwith gypsum and making the model) part 1	8	8
2	Producing the individual tray, part 1	8	8

3	Making the working model, part 1	8	8
4	Fabrication of bite wax pattern for complete dentures in upper and lower jaw, part 1	8	8
5	Transferring and fixing the master models of the upper and lower edentulous jaws in the articulator, part 1	8	8
6	Preliminary set up of artificial teeth. (setting of frontal and posterior teeth in eugnate skeletal relationship), part 1	8	8
7	Determination of tooth position and set up in distoocclusion, part 1	8	8
8	Determination of tooth position and set up in mesioocclusion, part 1	8	8
9	Registration of the eccentric position of the mandible and adjusting the inclination of the condylion paths on the articulator using position registers; basic principles of balanced occlusion with complete dentures, part 1.	8	8
10	Final laboratory procedures and finoishing the complete dentures. Errors in the final laboratory stages in producing CD, part 1	8	8
11	Production of repositionig and occlusal bite appliance, part 1	8	8
12	Alternative therapeutic procedures in edentuolus patients: complete dentures with metal base, demo, part 1	8	8
13	Alternative therapeutic procedures in edentuolus patients: complete dentures retained by telescopic crowns, supradental complete denture, demo, part 1	8	8
14	Alternative therapeutic procedures in edentuolus patients: complete dentures retained by dental attchments, demo, part 1	8	8
15	Alternative therapeutic procedures in edentuolus patients: implant retained complete dentures, demo, part 1	8	8
	TOTAL	120	**120**
	Second semester		
1 Anatomical impression (pouring the impressionwith gypsum and making the model) part 2		8	16
2 Producing the individual tray, part 2		8	16
3 Making the working model, part 2		8	16
4 Fabrication of bite wax pattern for complete dentures in upper and lower jaw, part 2		8	16
5 Transferring and fixing the master models of the upper and lower edentulous jaws in the articulator, part 2		8	16
6 Preliminary set up of artificial teeth. (setting of frontal and posterior teeth in eugnate skeletal relationship), part 2		8	16
7 Determination of tooth position and set up in distoocclusion, part 2		8	16
8 Determination of tooth position and set up in mesioocclusion, part 2		8	16
9 Registration of the eccentric position of the mandible and adjusting the inclination of the condylion paths on the articulator using position registers; basic principles of balanced occlusion with complete dentures, part 2		8	16
10 Final laboratory procedures and finoishing the complete dentures. Errors in the final laboratory stages in producing CD, part 2		8	16
11 Production of repositionig and occlusal bite appliance, part 2		8	16
12 Alternative therapeutic procedures in edentuolus patients: complete dentures with metal base, demo, part 2		8	16
13 Alternative therapeutic procedures in edentuolus patients: complete dentures retained by telescopic crowns, supradental complete denture, demo, part 2		8	16

14 Alternative therapeutic procedures in edentuolus patients: complete dentures retained by dental attchments, demo, part 2	8	16
15 Alternative therapeutic procedures in edentuolus patients: implant retained complete dentures, demo, part 2	8	16
TOTAL	120	**240**

Recommended literature:

1. Krstić M., Petrović A., Stanišić Sinobad D., Stošić Z.: Stomatološka protetika, Totalna proteza, Dečje novine, 1991.
2. Martinović Ž., Tihaček Šojić Lj., Živković R.:Totalna zubna proteza, Autorsko izdanje, Beograd 2015.

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **240**	Other modes of teaching process: The student is obliged to produce 8 complete dentures in the lab for patients during the program for students on integrated dental studies.	Study research work:	Within professional practice, a compulsory student program is envisaged, which includes the independent performance of the activities that the student has previously mastered through active theoretical and practical teaching with the supervision of the responsible teacher and the method in charge of practical teaching in the dental laboratory. **360**

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	20
Activities at practicals	27	Practical exam	40
Colloquial exams	7	Oral exam	
Seminars	3		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: ORAL PHYSIOLOGY

Professor in charge (Name, middle initial letter, surname): Elena S. Krsljak

Course status (compulsory/elective): Compulsory

ECTS: 4	**Year of the study: First**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17FIZL**

Objectives of the course:
Introducing students to the basic physiological processes in orofacial region which are of importance for Dental Tehnician Prosthodontist

Outcome of the course
Student is able to perform the analysis of all the parameters in the oral cavity related to the planning and functional performance of the dental prostheses

Content of the course

Lectures		teacher	No of sessions
1	Saliva-composition and functions	**Elena S. Krsljak**	2
2	Salivary secretion regulation	**Elena S. Krsljak**	2
3	Orofacial pain – mechanisms and transmission	**Elena S. Krsljak**	2
4	Mechanoreceptors, thermoreceptors and chemoreceptors in oral cavity	**Elena S. Krsljak**	2
5	Chemosensation - smell and taste senses	**Elena S. Krsljak**	2
6	Saliva as a diagnostic fluid	**Elena S. Krsljak**	2
7	Midterm recap - saliva, senses and types of receptors in the oral cavity.	**Elena S. Krsljak**	2
8	Morfology of skeletal muscles. Neuromuscular transmission.	**Elena S. Krsljak**	2
9	Mechanism of skeletal muscles contraction.	**Elena S. Krsljak**	2
10	Function of the muscle spindle. Muscle tone.	**Elena S. Krsljak**	2
11	Temporomandibular joint – physiology and functions	**Elena S. Krsljak**	2
12	Gnatodinamometry.	**Elena S. Krsljak**	2
13	Muscles of mastication. Mastication control	**Elena S. Krsljak**	2
14	Swallowing reflex. Vomiting reflex	**Elena S. Krsljak**	2
15	Types of mastication	**Elena S. Krsljak**	2
	TOTAL		**30**

Practical sessions/method units and vocationl practice- single work		No of sessions	
1	Determination of the saliva specific weight	1	
2	Determination of the viscosity of saliva.	1	
3	Stimulated and unstimulated salivation	1	
4	Biochemical analysis of salivary compounds	1	
5	Recap – saliva	1	
6	Determination of pain types in the oral cavity	1	
7	Taste differentiation	1	
8	Relations between senses of smell and taste	1	
9	Mechanosensation in the oral cavity	1	
10	Thermosensation in the oral cavity	1	
11	Recap – senses in the oral cavity	1	
12	Movements control during mastication	1	

13	Analysis of the forces and the momentum in TMJ	1	
14	Gnatodinamometry.	1	
15	Recap- skeletal muscles, TMJ	1	
	TOTAL	**15**	

Recommended literature:
Oral Physiology- Elena Krsljak

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **15**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums,

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	27	Written test	60
Activities at practicals	3	Practical exam	/
Colloquial exams	10	Oral exam	/
Seminars	0		
Other	/		

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**	
Level of studies: Basic vocational studies – 1st level	
Course: BASIC GNATHOLOGY	
Professor in charge (Name, middle initial letter, surname): Slobodan M. Dodić	
Course status (compulsory/elective): Compulsory	
ECTS:4	**Year of the study: first**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17 GNAT**
Objectives of the course: Student should master basic concept and principles of occlusion and physiology of temporomandibular joint.	
Outcome of the course After the course, student should: • know physiology and anatomy of TMJ • know characteristics of physiological and pathological occlusion • routinely work with middle values articulators and semi-adjustable articulators Routinely knows and models occlusal surfaces with PK Thomas method and stabilization Michigen splint.	

Content of the course

Lectures		teacher	No of sessions
1	Craniomandibular joint – anatomic and funcional specific characteristics.	Slobodan M. Dodić	1
2	Oro-facial muscles, specific functional cjaracteristics of masticatory muscles.	Slobodan M. Dodić	1
3	Physiological regulation of mandibular movements.	Slobodan M. Dodić	1
4	Anatomic determinants of mandibular movements: posterior joint guidance, sagital and lateral condilar path, mandibular side shift, anterior (occlusal) guidance, posterior teeth influence on mandibular movements, guidance with group od teeth, canine guidance.	Slobodan M. Dodić	1
5	Mandibular movements. Classification, basic mandibular movements, maximal mandibular movements, graphic registration of maximal movements, Poselt diagram, Gothic arch. Functional mandibular movements: chewing, chewing cycle, chewing sequence, neuromuscluar regulation, chewing movements registration, swallowing, swallowing phases, speech.	Slobodan M. Dodić	1
6	Referent mandibular positions: physiological stillness position, mechanisms which maintain mandible in physiological stillness position, free interocclusal space, intercuspal madibular position, dental arches interference in different skeletal classes, dental contact interference in ICP, VD of occlusion, occlusal plane, central mandibular position, dental contact interference in CR, sliding from CR to ICP, importance of referent mandibular positions in reconstructive dentistry.	Slobodan M. Dodić	1
7	Characteristics of physiologically optimal occlusion	Slobodan M. Dodić	1
8	Characteristics of unphysiological occlusion: teeth loss, central contacts loss, teeth migration, occlusal plane continuity disorder, occlusal interference, muscle hyperactivity, craniomandibular disfunction.	Slobodan M. Dodić	1
9	Acticulators: definition, purpose, classification, basic parts.	Slobodan M.	1

		Dodić	
10	Possibilities of mandibular rotation simulation, terminal rotation axis, projection of terminal rotation axis, transfer cheeck bow, kinematic cheeck bow, upper plaster cast transfer in the articulator.	Slobodan M. Dodić	1
11	Lower plaster cast transfer in the articulator, choice of referent mandibular position, CR registration, registrations checking (split cast technique).	Slobodan M. Dodić	1
12	Excentric mandibular movements simulation in adjustable articulators	Slobodan M. Dodić	1
13	Occlusal therapy (OT): modalities, aims, plan of occlusal therapy. Reversible OT, Michigen (stabilization) splint. Prognosis and significance of reversible OT.	Slobodan M. Dodić	1
14	Choice of occlusion model during ireversible OT. Bilaterally balanced occlusion. Choice of referent mandibular position during OT; central occlusion contacts type, contact dental interference during excentric mandibular movements (choice of optimal guidance system).	Slobodan M. Dodić	1
15	Choice of occlusion model during ireversible OT. Mutually protected occlusion. Choice of referent mandibular position during OT; central occlusion contacts type, contact dental interference during excentric mandibular movements (choice of optimal guidance system).	Slobodan M. Dodić	1
	TOTAL		15

Practical sessions/method units and vocationl practice- single work			
1	Cranio-mandibular joint junction, mandibular movements, video presentation, demonstration on simulators "Logic 1" and "Logic 2", anatomic determinants of mandibular movements, written practice		2
2	Articulators- video presentation, types, parts, working with middle values articulators, written practice.		2
3	Transfer cheek bow, types, parts, CR registration, upper and lower jaw registration towards mandible rotation centres, upper plaster cast transfer into articulator – video presentation, demonstration and individual work on fantoms, written practice.		2
4	Mandible CR – registration, difference between CR and ICP, wax registers of CR, mechanographic registrations of CR, lower plaster cast transfer into articulator – video presentation, demonstration and individual work on fantoms, written practice.		2
5	Position registrations, protrusion position registration, adjustement of joint and incisal guidance on semi-adjustable articulators with protrusion and laterotrusion registrations – video presentation, demnontration and individual student work on fantoms, written practice.		2
6	Occlusion analizing on plaster casts and in articulators 1 – anterior teeth relations in ICP position, vertical and horizontal overlap, posterior teeth relations in ICP position (antero-posterior and buco-lingual), central occlusal contacts – video presentation, demonstration, individual students work on gnathology casts, written practice.		2
7	Occlusion analyzing on plaster casts and in articulators 2 –anterior and postertior teeth relations during excentric mandibular movements, types of mandibular guidance, protrusion, mediotrusion, laterotrusion cusps paths, posterior teeth contacts during excentric mandibular movements – occlusal interferences – video presentation, demonstration, individual students work on gnathology plaster casts,		2

	written practice.		
8	Michigen splint production in patients with craniomandibular disfunction – demonstration practice		2
9	Plaster cast trasfer in the articulator. Michigen splint modeling in articulator – demonstrational practice and individual student work.		2
10	Occlusal relief modeling with PK Thomas method on upper posterior teeth- video presentation, demonstration on gnathology plaster casts, model preparation, introduction to instruments.		2
11	Occlusal relief modeling with PK Thomas method, modeling of occlusal surfaces of teeth 24, 25, 26, analyzing and correction of occlusal relations in Icp and during excentric movements of articulator.		2
12	Occlusal relief modeling with PK Thomas method, modeling of occlusal surfaces of teeth 24, 25, 26, analyzing and correction of occlusal relations in Ikp and during excentric movements of articulator.		2
13	Occlusal relief modeling with PK Thomas method on lower posterior teeth - video presentation, demonstration on gnathology plaster casts, model preparation, introduction to instruments.		2
14	Occlusal relief modeling with PK Thomas method, modeling of occlusal surfaces of teeth 45, 46, 47, analyzing and correction of occlusal relations in Icp and during excentric movements of articulator.		2
15	Occlusal relief modeling with PK Thomas method, modeling of occlusal surfaces of teeth 45, 46, 47, analyzing and correction of occlusal relations in Icp and during excentric movements of articulator.		2
	TOTAL		30

Recommended literature:

Basic gnathology, Darinka Stanišić Sinobad, 2001, Beograd BMG

Lecture 1 (pages 53-67), Lecture 2 (pages 41-49), Lecture 3 (pages 103-119), Lecture 4 (pages 137-148), Lecture 5 (pages 155-174), Lecture 6 (pages 181-191), Lecture 7 (pages 201-208), Lecture 8 (pages 211-218), Lecture 9 (pages 229-244), Lecture 10 (pages 247-257), Lecture 11 (pages 258-267), Lecture 12 (pages 271-281), Lecture 13 (pages 373-389), Lecture 14 (pages 391-399), Lecture 15 (pages 403-406, 459-469)

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **15**	Practicals: **30**	Other modes of teaching process:	Study research work:	

Methods of teaching process:

Lectures, practical sessions, colloquium

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Practical exam	40
Activities at practicals	27	Test	20
Colloquial exams	10		
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: DENTAL PUBLIC HEALTH

Professor in charge (Name, middle initial letter, surname): Ivanka S. Gajić

Course status (compulsory/elective): Elective

ECTS: 6	**Year of the study: I**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17JAZD**

Objectives of the course:
Enable students to gain basic theoretical knowledge in dental public health and to master the skills of their application in future everyday dental practice.

Outcome of the course
After mastering the course the student is trained to:

- **define public health risk factors for general and oral health**
- **connect public health and dental practice**
- **implement public health measures to prevent oral, noncommunicable and communicable diseases**
- **applay health education programs in the team work in order to prevent oral diseases**

Content of the course

Lectures		teacher	No of sessions
1	Introduction to public health and dental public health	prof I. Gajic	2
2	Basis of epidemiolgy, epidemiology of noncommunicable and communicable diseases	prof I. Gajic	2
3	Epidemilogy of oral diseases, epidemiological research of oral diseases	prof I. Gajic	2
4	Public health measures for the protection of air from pollutin and prevention of oral diseases	prof I. Gajic	2
5	Public health measures for the protection water and soil from pollution and prevention of oral diseases	prof I. Gajic	2
6	Nutrition and general and oral health, nutritional diseases and nutritional public health measures	prof I. Gajic	2
7	Social- medical diseases, oral diseases as a social- medical problems and public health measures of prevention	prof I. Gajic	2
8	Cardiovsculare diseases and public health measures of prevention	prof I. Gajic	2
9	Malignant diseases and public health measures of prevention	prof I. Gajic	2
10	Traumatism and public health measures of prevention	prof I. Gajic	2
11	Alcoholism, drug addiction, smoking, sexual risk behavior and public health measures of prevention	prof I. Gajic	2
12	Socio-economic and demographic characteristics of the population and their impact on general and oral health	prof I. Gajic	2
13	Habits, attitudes and behavior of the population and their impact on general and oral health	prof I. Gajic	2
14	Health education of the population, health education methods and resources	prof I. Gajic	2
15	Health care system of the population	prof I. Gajic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work		2	
1	Assessment of the health status of the population	2	

2	Factors that affect the health status of the population	2	
3	Indices of general health	2	
4	Indices of oral health	2	
5	Data sources for assessing the health status of the population	2	
6	Making a questionnaire and demonstrating its application	2	
7	Epidemiology of communicable diseases	2	
8	Epidemiology of noncommunicable diseases	2	
9	Epidemiological methods of health assessment	2	
10	Epidemiological chain of oral diseases	2	
11	Principles of proper nutrition of the population	2	
12	Assesssment of nutrition and nutritional status of the population	2	
13	Preparation of health education programs (proposals) for health protection of different population groups	2	
14	Preparation of health education programs (proposals) for oral health protection	2	
15	Preparation of public health programs (proposals) for oral health protection	2	
	TOTAL	30	

Recommended literature:

1. Dovijanic P., Janjanin M., Gajic I., Radonjic V., Djordjevic S., Borjanovic S.: Social Medicine with Hygiene ane Epidemiogy. Institute for Textbooks and Teching Resources, Belgrade, 1995.
2. Janjanin M., Dovijanic P., Gajic I., Radonjic V., Dimitrijevic D.: Social Medicine with Hygiene ane Epidemiogy. Practicum I. Institute for Textbooks and Teching Resources, Belgrade, 1996.

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **30**	Other modes of teaching process: colloquium	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: MEDICAL ECOLOGY

Professor in charge (Name, middle initial letter, surname): Ivanka S. Gajic

Course status (compulsory/elective): Elective

ECTS: 6	**Year of the study: 1st**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17MEEN**

Objectives of the course:
To acquaint students with basic medical ecology elements and inform them about the inflence of environment on general and oral health.

Outcome of the course
After mastering the course the student is trained to:

- **recognise the environmental risk factors for general and oral health**
- **identify the role of physical, chemical and biological environmental pollutants and their influence on oral health**
- **participate in integrated programs concerned with prevention of oral diseases as a part of environmental protection**

Content of the course

Lectures		teacher	No of sessions
1	Introduction to medical ecology; the history and development ecology as a science and as a practice	prof I. Gajic	2
2	Ecological health risk factors; types, sources, characteristics; influence on human health	prof I. Gajic	2
3	Air and health; elements of climate and microclimate and human health	prof I. Gajic	2
4	Air pollution; types and sources of pollutants; harmful effects of pollutants on general and oral health	prof I. Gajic	2
5	Global effects of air pollution; the effects on flora, fauna and humans	prof I. Gajic	2
6	Water and health; types and characteristics of water; the influence on general and oral health	prof I. Gajic	2
7	Pollutin of water; types and sources of pollutants; the influence of polluted water on general and oral health	prof I. Gajic	2
8	Soil; composition and contamination; the influence on general and oral health	prof I. Gajic	2
9	Waste materials and environment; types and sources of waste materials; the influence of solid and liquid waste on human health	prof I. Gajic	2
10	Medical waste materials/dental waste materials; medical waste management	prof I. Gajic	2
11	Ecosphere and foodstuff contamination; types and sources of contaminants	prof I. Gajic	2
12	Physical and chemical contamination of foodstuffs and the influence on general and oral health	prof I. Gajic	2
13	Biological contamination of foodstuffs and the influence on general and oral health	prof I. Gajic	2
14	Housing hygiene; the infleuence of housing on human health; protective measures against unfavorable living conditions	prof I. Gajic	2

15	School hygiene; the influence of school environment on health of children and youth; protective measures against unfavorable school conditions	prof I. Gajic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work			
1	Making a model of the natural ecosystem		2
2	Creation of a hazard map in the biosphere		2
3	Making a model of the technosphere		2
4	Creation of a hazard map in certain ecosystems of technosphere		2
5	Making a model of air pollution		2
6	Making a model of water pollution		2
7	Making a model of contamination of soil		2
8	Making a model of contamination of foodstuffs		2
9	Making a model of the global effects of air pollution		2
10	Analysis of laws and regulations related to the quality of air, water, soil and food		2
11	Making a model for protecting food from contamination in the food chain		2
12	Forging food; protection of consumer rights		2
13	Zoning of the settlement; development of hygienic housing model		2
14	Defining the criteria and developing “Healthy School”		2
15	Development of waste management in dental health institutions		2
	TOTAL		30

Recommended literature:

Kocijancic R.Hygiene. Institute for Textbooks and Teching Resources. Belgrade, 2002. (selected chapters)

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **30**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	5	Oral exam	
Seminars	5		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: LEGAL MEDICINE

Professor in charge (Name, middle initial letter, surname): Puzovic Ž Dragana

Course status (compulsory/elective): Elective

ECTS: 6	**Year of the study: I**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17MEPR**

Objectives of the course:
The students study professional duties and obligations of healthcare workers, criminal issues in medical practice; basic ethical principles and patient's rights in dental practice

Outcome of the course
After mastering the course, the student is trained to:
- explain professional duties and obligations of healthcare workers, basic ethical principles in dental practice
- recognise criminal act in professional work
- explain patient's rights in dental practice

Content of the course

Lectures		teacher	No of sessions
1	Introduction to legal medicine	Prof. D. Puzovic	2
2	Professional duties and obligations of healthcare workers and patients rights	Prof. D. Puzovic	2
3	The basic ethical principles in dental practice	Prof. D. Puzovic	2
4	The ethical principles of communication between healthcare workers and patients	Prof. D. Puzovic	2
5	The patient's right on information about dental procedures, informed consent for dental procedure, responsibility of healthcare workers for lack of informed consent	Prof. D. Puzovic	2
6	The deontological issues of healthcare workers	Prof. D. Puzovic	2
7	The obligation of composing stomatological documentation, pacient's right for insight into stomatological documentation, composing and role of health questionnaire	Prof. D. Puzovic	2
8	The iatrogenic diseases	Prof. D. Puzovic	2
9	The suffocative iatrogenic injures of patients during dental procedures, criminal responsibility of healthcare workers	Prof. D. Puzovic	2
10	The physical and mechanical iatrogenic injures of patients during dental procedures, criminal responsibility of healthcare workers	Prof. D. Puzovic	2
11	The human health damage during dental procedures, criminal responsibility of healthcare workers	Prof. D. Puzovic	2
12	The legal issues of human subject medical research	Prof. D. Puzovic	2
13	The ethical and legal issues of organ transplantation	Prof. D. Puzovic	2
14	The legal aspect of human death. The legal issues of euthanasia	Prof. D. Puzovic	2
15	The odontostomatological data in identification, role and significance of odontostomatological data in identification	Prof. D. Puzovic	2
	TOTAL		**30**

Practical sessions/method units and vocationl practice- single work			
1	The concept and purpose of stomatological documentation	T.A. T.Tasic	2
2	The obligation of dental recordkeeping	T.A. T.Tasic	2
3	The obligation of dental recordkeeping- content and extent	T.A. T.Tasic	2
4	The principles of dental recordkeeping	T.A. T.Tasic	2
5	The role of adequate dental records in patient's right to health	T.A. T.Tasic	2
6	The role and significance of dental records for expertises in medical negligence	T.A. T.Tasic	2
7	The legal consequences for inadequate dental recordkeeping	T.A. T.Tasic	2
8	The medical negligence- background	T.A. T.Tasic	2
9	The healthcare worker's responsibility for medical negligence	T.A. T.Tasic	2
10	The criminal aspect of medical negligence	T.A. T.Tasic	2
11	The criminal responsibility for lack of hygienic measures in medical practice	T.A. T.Tasic	2
12	The healthcare worker's responsibility for lack of hygienic measures in dental practice	T.A. T.Tasic	2
13	The use of medical instruments and devices- danger to the patient's health	T.A. T.Tasic	2
14	The legal obligations and criminal responsibility of healthcare workers for inadeuqate instruments and devices	T.A. T.Tasic	2
15	The obligations of healthcare workers in inspection of medical instruments and devices in dental practice	T.A. T.Tasic	2
	TOTAL		**30**

Recommended literature:

1. Radišić J. The legal medicine, Homos, Belgrade, 2008. (selected chapters)
2. Zagrađanin D. The basis of medical ethics for students of School of Dental Medicine, Belgrade, 2007

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **30**	Other modes of teaching process: Colloquium **1**	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	**3**	Written test	**60**
Activities at practicals	**27**	Practical exam	/
Colloquial exams	**10**	Oral exam	/
Seminars	/		
Other	/		

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: SUMMER PROFESSIONAL PRACTICE 1

Professor in charge (Name, middle initial letter, surname): Ivica Z Stančić

Course status (compulsory/elective): Compulsory

ECTS:6	**Year of the study: first**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17LSP1**

Objectives of the course: Introduction of basic principles of planning and independent work in removable acrylic dentures productions as well as contemporary prosthetic devices in edentoulesness patients.

Outcome of the course

After summer practice student should be able to independently conduct the following procedures:

- Edentulouss study cast analysis in articulator;
- Conventional complete denture production;
- Final laboratory procedures in complete acrylic dentures production, specific detalis in procedures, materials, equipement, polymerization methods, tools for processing and polishing, reparing and relining procedures.

Content of the course

Practical sessions/method units and vocationl practice- single work		No of sessions
1	Impressions preservation, analysing of impression detalis for specific purpose, preparation impression surface for casting, anatomic impression casting. Edentulous jaw, preparation of master cast, analysing in articulator. Individual tray types, individual tray production of auto and photo polymerizing acrylic resin and termoplastic materials.	30
2	Functional impression casting, master cast preparation, wax rims producion	30
3	Transfer of master cast to articulator of middle values of semi adjustable articulators and adjustment with statical registers. Methods of interocclusal relationship registrations.	30
4	Preliminary teeth setup, defintive teeth setup. Analysis of occlusion in edentulous patients on casts in articulator, front teeth inter-relationship in intercuspal position, centric occlusal contacts, front and side teeth inter-relationship during excentric mandible movements, mandible movements types, protrusion, mediotrusion, laterotrusion trajectories of side teeths' supportive cusps, side teeths' contacts during excentric mandible movements.	30
5	Terminal laboratory procedures in complete dentures production. Dentures modeling in wax, acrylic resin polimerization, processing and polishing. Reparation of complete dentures plate and teeth. Specific details in procedures, materials, equipement, polimerization methods, tools for processing and polishing, reparation and relining. Erkopress and Vacuum-press devices and their application.	30
6	Production of Michigen stabilization splint in patients with CMD, upper and lower jaws impressions, master casts production, tranfer od casts into articulator, Michigen splint modeling, polimerization, processing and polishing.	10
	TOTAL	160

Summer practice will take place by teacher in charge and mentor (summer practice report is filled out by mentor, and ESP number in index by teacher in charge) in laboratory of Clinic for Prosthetic Dentistry. Teacher in charge for summer practice keeps record about regular attedance and students' activities.After finished summer practice student doesn't get evaluation, but is under obligation to fill the pattern made for every student about their activities.

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: Esthetic design of dental restorations

Professor in charge (Name, middle initial letter, surname): Aleksandra B. Špadijer Gostović

Course status (compulsory/elective): Compulsory

ECTS: 5	**Year of the study: second**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17ESTE**

Objectives of the course:
Learning fundamental esthetic criteria and basic principles for esthetically driven design and fabrication of dental restorations

Outcome of the course
Student will acquire knowledge and skills to:
Take part in dental team for planning the esthetic restorative procedures; to perform esthetic analysis, to fabricate the diagnostic wax-up; to learn teeth color shade system; to determine tooth color using conventional and instrumental methods; patient management by the dental laboratory for collecting documentation: photographic status and shade selection; to apply biomimetic principles for designing and fabricating esthetic part of dental restorations; application of layering techniques for composite and ceramic materials.

Content of the course

Lectures		Teacher	No of sessions
1	Introduction to Dental Esthetics	Spadijer Gostovic A.	1
2	The Basics of Semiology (signs identification and interpretation)- non-verbal communication, visual elements in art and media	Spadijer Gostovic A.	1
3	Significanse of visual perception, difference between figure and background, assimilation and contrast for esthetic appearance	Spadijer Gostovic A.	1
4	Esthetic challenges in Contemporary Dentistry	Spadijer Gostovic A.	1
5	Objective and subjective criteria in esthetic analysis	Spadijer Gostovic A.	1
6	Artistic visual elements, photology basics, dark/ light aspects, importance of photodocumentation	Spadijer Gostovic A.	1
7	Esthetic principles for fixed dental restorations	Spadijer Gostovic A.	1
8	Esthetic considerations for mobile dental restorations	Spadijer Gostovic A.	1
9	Patient management by the dental and laboratory team, treatment planning, choice of restorative material and technique, design and fabrication of dental restorations	Spadijer Gostovic A.	1
10	Color and perception, the fundamentals of physiology, sensory and psychological elements	Spadijer Gostovic A.	1
11	Color expression, harmony and color interaction. Natural tooth color, hue, brightness and chroma	Spadijer Gostovic A.	1
12	Teeth colors in human dentition and their impact on final esthetic appearance of restoration	Spadijer Gostovic A.	1
13	Layering techniques for composite and ceramic restorative materials	Spadijer Gostovic A.	1

14	The teeth color determination: conventional with shade guides and instrumental methods	Spadijer Gostovic A.	1
15	Seminars- oral presentation and discussion	Spadijer Gostovic A.	1
	TOTAL		15

Practical sessions/method units and vocationl practice- single work			
1	Perception exercise and esthetic analysis	1	3
2	Treatment planning and diagnostic approach	1	3
3	Diagnostic wax-up	1	3
4	Restorative materials and techniques	1	3
5	Restorative materials and techniques	1	3
6	Esthetic principles for fabrication fixed dental restorations	1	3
7	Esthetic principles for fabrication fixed dental restorations	1	3
8	Esthetic principles for fabrication complete dentures	1	3
9	Esthetic principles for fabrication partial dentures	1	3
10	Veneering technique for metal ceramic crowns and special effects	1	3
11	Ceramic and composite layering for indirect restorations	1	3
12	Teeth color determination with Vita Classic shade guide	1	3
13	Teeth color determination with Vita 3D Master shade guide	1	3
14	The teeth color determination: conventional with shade guides	1	3
15	The teeth color determination: conventional with shade guides	1	3
	TOTAL	15	45

Recommended literature:

1. Magne P, Belser U. Bonded Porcelain Restorations in the Anterior Dentition: A Biomimetic Approach.Quintessence publishing; 2002 , chapters 2.(57-99), 5.(179-239) 7.(293-335)
2. Stamenkovic D and co-authors.: Dental materials, 2009, Book 1: chapters 9., 26.
3. Stamenkovic D and co-authors.: Dental materials, 2012, Book 2: chapter 7.
4. Fradeani M. Esthetic Rehabilitation In Fixed Prosthodontics: Esthetic Analysis: A Systematic Approach To Prosthetic Treatment, Volume 1. Quintessence publishing; 2004.

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **15**	Practicals: **15**	Other modes of teaching process:	Study research work:	**45**

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam 60**	**Total 100**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	/
Colloquial exams	/	Oral exam	/
Seminars	10		
Other	/		

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: PERIODONTICS AND ORAL PATHOLOGY

Professor in charge (Name, middle initial letter, surname): Jankovic M. Sasha

Course status (compulsory/elective): Compulsory

ECTS:6	**Year of the study: second**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17PARO**

Objectives of the course:
The student should be able recognize oral mucosa changes. Training in diagnosis of periodontal disease.

Outcome of the course:
Following the theoretical and practical lessons, the student should be trained to:

- **Differentiate between healthy and non-healthy oral mucosa**
- **Recognizes aetiology and characteristics of oral lesions**
- **Recognizes signs of oral infections**
- **Recognizes different types of periodontal disease**

Content of the course

Lectures		teacher	No of sessions
1	Oral mucosa: characteristics	Prof .dr Saša Janković	
2	Classification of the oral diseases – criteria for clasiffication based on aetiology, morphology, anatomy, histology, localization	Prof .dr Saša Janković	2
3	Prevention of oral diseases	Prof .dr Saša Janković	2
4	Preliminary diagnosis of oral diseases	Prof .dr Saša Janković	2
5	Oral infections – clinical findings and diagnosis	Prof .dr Saša Janković	2
6	Oral infections – viral infections	Prof .dr Saša Janković	2
7	Recurrent oral ulcerations	Prof .dr Saša Janković	2
8	Anatomy and histology of the periodontium	Prof .dr Saša Janković	2
9	Periodontal diseases classification. Differential diagnosis.	Prof .dr Saša Janković	2
10	Etiology of the periodontal disease	Prof .dr Saša Janković	2
11	Treatment plan for the periodontal disease	Prof .dr Saša Janković	2
12	Initial periodontal treatment	Prof .dr Saša Janković	2
13	Urgent conditions in periodontics	Prof .dr Saša Janković	2
14	Traumatic occlusion and its consequences	Prof .dr Saša Janković	2
15	**Maintenahnce of the periodontal patient**	Prof .dr Saša Janković	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work			
1	Protective measures against infective transmisional diseases	1	4
2	Characteristics of healthy oral mucosa	1	4
3	Signs and symptoms of oral medicine diseases	1	4
4	Diagnostical tools in the oral medicine	1	4
5	Clinical examination in oral medicine	1	4
6	Anatomy of the periodontium	1	4

7	Clinical features of the periodontal disease	1	4
8	Periodontal condition assessment	1	4
9	Diagnosis and sifferential diagnosis of the periodontal disease	1	4
10	Ultrasonic and hand instruments in periodontics	1	4
11	Ultrasonic and hand instruments in periodontics	1	4
12	Traumatic occlusion and its consequences	1	4
13	Ultrasonic and hand instruments in periodontics	1	4
14	Ultrasonic and hand instruments in periodontics	1	4
15	Ultrasonic and hand instruments in periodontics	1	4
	TOTAL	15	60

Recommended literature:

Jan Lindhe, Niklaus P. Lang, Thorkild Karring. Clinical Periodontology and Implant Dentistry. Wiley, Apr 15, 2009 - Medical - 1448 pages

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **15**	Other modes of teaching process: 1 seminary	Study research work:	**60**

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**			
Level of studies: Basic vocational studies – 1st level			
Course: PARTIAL REMOVABLE DENTURES			
Professor in charge (Name, middle initial letter, surname): Miodrag Lj. Šćepanović			
Course status (compulsory/elective): Compulsory			
ECTS:17		**Year of the study: 2nd**	
Entry requirements:(passed exams from the previous years) /		**Course code:** **ZT17PAPR**	
Objectives of the course: Students training for the production process of removable acrylic and metal partial dentures			
Outcome of the course After the course, the student is enabled to: actively participate in planning and to independently create acrylic and metal partial removable dentures			
Lectures-3rd semestar		teacher	No of sessions
1	General concepts of partial edentulism: Partial edentulism-etiology and therapy. Changes in the supporting tissues. Classification system of partial edentulism. Types of partial dentures. Partial removable acrylic denture.		1
2	Parts of partial acrylic prosthesis: Gingival part. Dental part. Connection of gingival and dental part. The effect of the force on the partial plate prosthesis and the opposition to these forces		1
3	Clinical and laboratory stages in the making of partial acrylic dentures: Anatomical impression, casting of anatomical impression. Types of individual trays, functional impression.		1
4	Creating a working cast. Creation of a record bases, determination of jaw relation records. Choice of artificial teeth. Specificity of teeth setting in partial denture.		1
5	Retention, stabilization, occlusal loading and guiding in partial acrylic prosthesis.		1
6	Retention and Retention Elements. Wire clasps (types and parts). Stabilization and stabilization elements. Guiding of partial acrylic prosthesis.		1
7	Modeling of the prosthesis in wax, installation of wire clasps. Polymerization of acrylate. Processing and polishing.		1
8	Submission and correction of partial plate prostheses. Repairing and relining of partial acrylic dentures.		1
9	Metal partial removable prosthesis: Definition. Types of partial metal dentures. Comparative values of acrylic and metal partial removable prosthesis.		1
10	Load of supporting tissues with partial removable metal prosthesis. Preparation of teeth and supporting tissues.		1
11	Parts of partial skeletal prosthesis: Gingival part (major connector, denture bases).		1
12	Dental part (clasps, molded clasps, stabilizing elements, elements for transmitting chewing pressure). Connection of gingival and dental		1

	part.		
13	Application of dental surveyor in planning and partial dentures: Definition and classification of dental surveyors		1
14	Position of the model in a dental surveyor. Path of insertion of dentures. Path of withdrawal of the dentures. Equators (from the path of insertion and path of withdrawal of the prosthesis). Depth of undercut areas and its measurement. Guiding planes		1
15	Path of insertion of dentures. Path of withdrawal of the dentures. Equators (from the path of insertion and path of withdrawal of the prosthesis). Depth of undercut areas and its measurement. Guiding planes		1
	TOTAL		15

Lectures-4th semestar		teacher	No of sessions
1	Partial skeletal denture planning. Analysis of the model for the studies in the articulator and the dental surveyor. Principles of planning of PSP. Creating a PSP design.		1
2	Preparation of supporting tissues of the partial denture. Surgical preparation, periodontal preparation, conservative preparation, orthodontic preparation.		1
3	Prosthetic preparation of retention teeth.		1
4	Retention of partial skeletal prosthesis. Partial skeletal denture biostatics of the partial skeletal prosthesis.		1
5	Impression in making of partial skeletal prosthesis. Two-phase impression. Single-phase impression. Casting of the working model, transfer of design to the working model.		1
6	Laboratory stages in the production of partial skeletal prosthesis. Preparation of a working model for duplication.		1
7	Duplication of the working model. Transferring PSP design to a duplicate model. Impregnating (waxing) of the model. Creation of a wax model of partial denture base.		1
8	Installation of casting channels and investment. Preheating, firing of refractory block. Alloying and casting of alloys. Sanding and processing of castings.		1
9	Electrolytic polishing. Mechanical polishing.		1
10	Try in of the PSP metal framework. Preparation of metal denture framework, creation of wax saddles. Determination of intermaxillary relations. Teeth setting, modeling of wax saddles.		1
11	Polymerization of acrylate, finishing of the polymerized denture. Reparations and relining of partial skeletal prosthesis.		
12	Supradental partial prostheses. Special varieties of partial dentures: two-part prostheses, swing-lock prostheses, single-sided partial dentures.		1
13	Specificity of making a total denture metal base.		1
14	Immediate partial prosthesis, clinical and laboratory procedures in the production of immediate partial dentures. Transient (intermittent) prosthesis. Specificity of laboratory work.		1
15	Partial flexible dentures. Physical-mechanical characteristic of material		1

	and mechanism of retention of partial flexible dentures. Clinical procedures and laboratory procedures in the production of flexible partial dentures.		
			15
	TOTAL		**30**

Practical sessions/method units and vocationl practice- single work 3rd semestar		**Number of classes**	**vocationl practice**
1	Casting of anatomical Impression. Production of individual trays. Casting of a functional impression.	8	16
2	Fabrication of stone cast and record bases	8	16
3	Fabrication of wire clasps 1	8	16
4	Fabrication of wire clasps 2	8	16
5	Specificity of teeth setting in partial prosthesis. Modeling of the prosthesis in wax, installation of wire clasps.	8	16
6	Polymerization of acrylate. Processing and polishing	8	16
7	Repairs of partial acrylic dentures.	8	16
8	Repairs of clasp and teeth	8	16
9	Analysis of the model for studies in the articulator and dental surveyor. General and special plan of partial skeletal prosthesis.	8	16
10	Transferring of partial skeletal denture plan to the working model	8	16
11	Planning of casted clasps by BIOS system 1.	8	16
12	Planning of casted clasps by BIOS system 2.	8	16
13	Planning the design of partial skeletal prosthesis of partial edentulism of Kennedy class I, II, III, IV, and corresponding subclasses.	8	16
14	Drawing different skeleton designs	8	16
15	Planning the design of the partial skeletal prosthesis of the partial edentulism of Kennedy Class III and the corresponding subclasses.	8	16
	TOTAL		

Practical sessions/method units and vocationl practice- single work 4th semestar		**Number of classes**	**vocationl practice**
1	Planning the design of partial skeletal prosthesis in Kennedy class IV	8	16
2	Preparation of working model for duplication, modeling of refractory mass.	8	16
3	Waxing of a fireproof model. Transferring PSP Design to a Duplicate Model.	8	16
4	Creation of wax skeleton framework of partial prosthesis of partial edentulism type Kennedy class I, Kennedy class II and corresponding subclasses. Setting of casting channels.	8	16
5	Setting of casting chanels	8	16
6	Creation of wax skeleton framework of partial prosthesis of partial edentulism type Kenedi class III and corresponding subclasses as Kennedy class IV.	8	16
7	Setting of casting chanels	8	16
8	Investment in refractory mass.	8	16
9	Preheating and firing of the refractory block, melting and casting	8	16
10	Cooling and breaking of investment material.	8	16
11	Mechanical, electrochemical processing and polishing of metal framework	8	16
12	Demonstration exercise - the production of partial dentures from polymer "thermopress" technology 1	8	16

13	Demonstration exercise - the production of partial dentures from polymer "thermopress" technology 2	8	16
14	Completion of the remaining stages of fabrication of skeletal denture 1	8	16
15	Completion of the remaining stages of fabrication of skeletal denture 2	8	16
	TOTAL	**240**	**480**

Recommended literature:

Stamenković D. Prosthodontics, Partial dentures, Interprint, Belgrade, 2006, chapters 1, 2, 3, 4.3, 5

Trifunović D., Radlović S. et al.Prosthodontics, Institute for Textbooks, Belgrade, 1995, chapters 12, 13, 14, 17, 18, 19, 21

Total number of classes in active teaching:				Professional practice/independent work:
Lectures:	Practicals:	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	30
Activities at practicals	27	Practical exam	30
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: INDIRECT FILLINGS

Professor in charge (Name, middle initial letter, surname): Ilić M. Jugoslav

Course status (compulsory/elective): Compulsory

ECTS:5	**Year of the study: 2nd**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17INSP**

Objectives of the course:
Aquisition of basic knowledges and skills in field of indirect filling fabrication

Outcome of the course
On completion of the course student will be able to:
- Describe the types of indirect fillings
- Describe all the steps in fabrication of all types of indirect fillings
- Describe the techniques for indirect filling fabrication
- Describe the basic gnatology principles necessary for indirect filling fabrication
- Describe the cavity classes
- Distinguish the differences in cavity preparation according to type of indirect filling
- Describe the matherials for indirect filling fabrication

Content of the course

Lectures		teacher	No of sessions
1	Indirect fillings- indications, advantages and disadvantages	Assist. Prof. Ilić J.	1
2	Indirect fillings-types of indirect fillings	Prof. Grga Đ.	1
3	Indications. Instruments used in fabrication of indirect fillings	Assist. Prof. Beljić Ivanović K.	1
4	Gnatology basics in restorative dentistry	Prof. Živković S.	1
5	Cavity preparation for indirect fillings	Prof. Teodorović N.	1
6	Cavity preparation for aesthetic indirect fillings	Prof. Vujašković M.	1
7	Direct method of indirect filling placement	Assist. Prof. Petrović V.	1
8	Indirect method of indirect filling placement	Assist. Prof. Petrović V.	1
9	Indirect-direct method of indirect filling placement	Assist. Prof. Petrović V.	1
10	Indirect fillings as a part of complex dental proshtesis	Prof. Karadžić B.	1
11	Cementing of indirect fillings	Assist. Prof. Miletić V.	1
12	Indirect filling matherials-ceramics and composite	Assist. Prof. Miletić V.	1
13	Indirect filling matherials-alloys	Assist. Prof. Ilić J.	1

14	Supplemental and accesory matherials for indirect filling fabrication	Assist. Prof. Ilić J.	1
15	*CAD/CAM* technique in indirect filling fabrication	Prof. Todorović A.	1
	TOTAL		15

Practical sessions/method units and vocationl practice- single work			2
1	Basic principles and procedures in indirect filling fabrication		2
2	Impressions of prepared cavity- performing and analysis		2
3	Indirect filling working model fabrication		2
4	Analysis of cavity preparation for indirect fillings on models		2
5	Basic principles in direct method of indirect filling placement		2
6	Basic principles in indirect method of indirect filling placement		2
7	Basic principles in indirect-direct method of indirect filling placement		2
8	Wax modeling of indirect fillings		2
9	Cast mold fabrication		2
10	Casting of metal indirect fillings		2
11	Fabrication of ceramic indirect fillings		2
12	Problems in indirect filling fabrication		2
13	Fabrication of composite indirect fillings		2
14	Final adjustment, finishing and polishing of indirect fillings		2
15	Preparation of indirect fillings for cementing		2
	TOTAL		30

Recommended literature:

Živković S. (urednik), Vujašković M, Pap K, Grga Đ, Lukić A, Teodorović N: Osnovi restaurativne stomatologije, Data Status, Beograd 2009. Poglavlja: Preparacija kaviteta za indirektne ispune (str. 166-181), Osnovi gnatologije u restaurativnoj stomatologiji (str. 182-196), Materijali za zubne ispune (str. 275-302)

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **15**	Practicals: **30**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	40
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	20
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course:SAFETY AT WORK

Professor in charge (Name, middle initial letter, surname): Vojkan M. Lazic, Igor Đorđević

Course status (compulsory/elective): Compulsory

ECTS: 3	**Year of the study: second**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17ZNRD**

Objectives of the course: The students should meet and master the principles and modalities of everyday proper use of dental materials in the dental laboratory, as well as knowing that they are protected from dangerous substances, and consequently preventive working space.

Outcome of the course :

After finishing the course, the student should be able to:

- protect against the effects of harmful notoxes from dental materials and work space;
- properly use the dental materials;
- protect himself and other persons against infectious noxes from the print material and the compensation model;
- protect himself against noise in the work area;
- properly plan the working area of the dental laboratory;
- prevent the occurrence of occupational diseases;
- know how to extend the life and working life of dental technicians.

Content of the course

Lectures		teacher	No of sessions
1	Protection of the health of dental technicians at the workplace	Igor Djordjevic	2
2	Registration of dental materials and their biocompatibility	Igor Djordjevic	2
3	Dangers of dental materials used in a dental laboratory	Igor Djordjevic	2
4	Pictograms and their labels in dentistry	Igor Djordjevic	2
5	Defined parameters of the effect of dental materials on the body of the dental technician (inhalation, through the skin, eyes and swallowing)	Igor Djordjevic	2
6	Allergic manifestations caused by dental materials	Igor Djordjevic	2
7	Allergic contact dermatitis	Igor Djordjevic	2
8	Allergy to latex products	Igor Djordjevic	2
9	Allergic contact stomatitis	Igor Djordjevic	2
10	The effect of Nickel from dental materials to the health of a dental technician	Igor Djordjevic	2
11	The effect of Berilium and his vapor from dental materials on the health of a dental technician	Igor Djordjevic	2
12	Silicosis in dental technicians and its symptoms Professional diseases of dental technicians	Igor Djordjevic	2
13	Disinfection of impressions, working models in the dental laboratory	Igor Djordjevic	2
14	Noise protection in the working area of the dental laboratory	Igor Djordjevic	2
15	Planning workspace and dental laboratory in order to protect the health of dental technicians	Igor Djordjevic	2
	TOTAL		**30**

Practical sessions/method units and vocationl practice- single work			0
1			0
2			0
3			0
4			0
5			0
6			0
7			0
8			0
9			0
10			0
11			0
12			0
13			0
14			0
15			0
	TOTAL		**0**

Recommended literature:

1. Stamenković D.: Stomatološki materijali knjiga 3, Data Status, 2015. - poglavlje 14 (str. 293-307)

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **/**	Other modes of teaching process:	Study research work:	**/**

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	40	Written test	60
Activities at practicals		Practical exam	
Colloquial exams		Oral exam	
Seminars			
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: ORTHODONTIC APPLIANCES 1

Professor in charge (Name, middle initial letter, surname): Nenad Lj. Nedeljković

Course status (compulsory/elective): Compulsory

ECTS: 6	**Year of the study: second**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17ORT1**

Objectives of the course:
The student should be familiar with the principles of planning and mastering by making removable orthodontic appliances

Outcome of the course
After mastering the course, the student has been trained to create:
- acrylic removable devices;
- Intramaxillary casted devices
- Interamaxillary casted devices
- pendulum
- Hyrax with the bands
- Hyrax with foil.

Content of the course

Lectures		teacher	No of sessions
1	Definition and title of the course, tasks, significance and goals. Characteristics of normo-occlusion of deciduous, mixed and permanent dentition	Nikodijevic A.	2
2	The malocclusion of the teeth, teeth arch and bite in all three directions. Ethiology.	Stamenkovic Z.	2
3	Status of the teeth; Marking; Numerous state; Type and shape of the teeth, Study models. Instruments for analysis of study models	Stamenkovic Z.	2
4	Schwarz analysis, Determination of the middle of jaws and dental arch, comparison of dental arches in sagitals and transversals. Determination of the vertical position of the tooth. Assessment of the palatal shape and size.	Markovic E.	2
5	Analysis of available space in dental sequences in mixed and permanent dentition. Analysis of the bite in the sagittal, transversal and vertical directions	Markovic E.	2
6	Removable orthodontic appliances: retention elements	Nikolić P.	2
7	Removable orthodontic appliances: labial arch and springs	Nikolić P.	2
8	Removable orthodontic appliances: screws, additional elements	Nikolić P.	2
9	Removable orthodontic appliances: acrylic plate, bite plates	Nikolić P.	2
10	Cheliognathopalathoshisis. Creating a stimulator	Nikodijević A.	2
11	Making Intramaxillary casted devices	Nedeljković N.	2
12	Making Interamaxillary casted devices	Nedeljković N.	2
13	Pendulum	Milosavljevic Ž.	2
14	Hyrax with the bands	Milosavljevic Ž.	2
15	Hyrax with foil.	Milosavljevic Ž.	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work		No of sessions	Professional practice/independent work *
1	Development of normal occlusion of deciduous and permanent dentition. Deviations. Characteristics of normo-occlusion of deciduous, mixed and permanent dentition	4	4
2	Making study models.	4	4
3	Status of the teeth; Marking; Numerous state; Type and shape of the teeth.	4	4
4	Schwarz analysis, Determination of the middle of jaws and dental arch, comparison of dental arches in sagitals and transversals. Determination of the vertical position of the tooth. Assessment of the palatal shape and size.	4	4
5	Analysis of available space in dental sequences in mixed and permanent dentition. Analysis of the bite in the sagittal, transversal and vertical directions	4	4
6	Removable orthodontic appliances: retention elements	4	4
7	Removable orthodontic appliances: labial arch and springs	4	4
8	Removable orthodontic appliances: screws, additional elements	4	4
9	Removable orthodontic appliances: acrylic plate, bite plates	4	4
10	Creating a stimulator	4	4
11	Modeling in wax for Hyraks	4	4
12	Modeling in wax for Herbst appliance.	4	4
13	Pendulum	4	4
14	Hyrax with the bands	4	4
15	Hyrax with foil.	4	4
	TOTAL	60	60

Recommended literature:

1. **Марковић М. И сарадници :** Orthodontics, Медицинска књига, Београд-Загреб, 1988 (стр. 287-331)
2. **Лаптар В. И сарадници :** Orthodontic appliances, Школска књига, Загреб, 1992
3. **Милеуснић Б., Јовановиц Д. :** Orthodontic appliances with the base of orthodontics, Завод за уџбенике и наставна средства, Београд 2004
4. **Virtz U. :** Atlas of orthodontic and orofacial orthopedic technique, Dentaurum
5. **Јаношевић М. И сарадници** : Orthodontics for the Dental Tehnician Prosthodontist, Галаксија, Ниш 2014

Total number of classes in active teaching:				Professional practice/independent work: **60**
Lectures: **30**	Practicals: **60**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	30
Activities at practicals	27	Practical exam	30

Colloquial exams	510	Oral exam	
Seminars			
Other			

* **professional practice:** individual work of students outside of this fund for practical classes.

Content of professional practice:
Within professional practice, provided the student program which includes the independent activities that the student has previously mastered through active theoretical and practical teaching, with the supervision of the responsible teacher and the competent instructor for practical teaching in the laboratory.

Required student program within practical teaching: The student should create a removable orthodontic appliance.

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: DENTAL SERVICES ORGANIZATION AND MANAGEMENT IN DENTISTRY

Professor in charge (Name, middle initial letter, surname): Svetlana B. Jovanovic

Course status (compulsory/elective): Elective

ECTS:6	**Year of the study: 2nd**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17MENA**

Objectives of the course:
Introduction to the health care system, the specifics of dental health services and health management.

Outcome of the course
After mastering the course, the student is trained to:
-describe the health care system and general management principles
-conduct in teamwork dental health care
-apply basic management functions
-organize health records and records in dental health-care institutions

Content of the course

Lectures		teacher	No of sessions
1	The system of health care, basic models of health care system	Associate prof S. Jovanovic	2
2	The principles of health care, the rights and duties of patients	Associate prof S. Jovanovic	2
3	Quality health care and dental care	Associate prof S. Jovanovic	2
4	Medical service, dental health service, the types of health care institutions	Associate prof S. Jovanovic	2
5	Dental health activities at the primary, secondary and tertiary health care level	Associate prof S. Jovanovic	2
6	The working conditions of dental health institutions	Associate prof S. Jovanovic	2
7	Health records and records in dental health care institutions	Associate prof S. Jovanovic	2
8	Professional training of health workers and associates in dental care	Associate prof S. Jovanovic	2
9	The definition, characteristics and development management (general and medical)	Associate prof S. Jovanovic	2
10	Features of management in health institutions	Associate prof S. Jovanovic	2
11	Management functions: planning, organization, communication, control, leadership and coordination	Associate prof S. Jovanovic	2
12	Characteristics of a successful/effective manager	Associate prof S. Jovanovic	2
13	Conflict and conflict management	Associate prof S. Jovanovic	2
14	Collaboration, cooperation and teamwork	Associate prof	2

		S. Jovanovic	
15	Decision making and problem solving	Associate prof S. Jovanovic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work			1
1	Methods of testing the quality of health care and dental care		1
2	Patient satisfaction dental health care		1
3	Questionnaire design and demonstration of its application		1
4	Employee satisfaction in the dental health care		1
5	Questionnaire design and demonstration of its application		1
6	Methods of testing the quality of health care and dental care		1
7	Indicators of quality of health care		1
8	Indicators of quality dental health care		1
9	Planning and organization of work of dental offices/institutions		1
10	Description of the functions of management and their needs in the management process		1
11	Communication in the dental practice		1
12	Identification of its own ways of communication. Personal presentation		1
13	Creating professional biography (CV)		1
14	Oral presentation skills		1
15	Assessment of the performance of managers. Self-assessment of the performance of their own work		1
	TOTAL		15

Recommended literature:

Micovic P.Health management.Chamber of Health Institutions in Serbia, Belgrade, 2008.
p. 1-56; 72-94; 101-142

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **15**	Other modes of teaching process: Colloquium, seminars	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	5	Oral exam	
Seminars	5		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: NUTRITION AND ORAL HEALTH

Professor in charge (Name, middle initial letter, surname): Ivanka S. Gajic

Course status (compulsory/elective): Elective

ECTS: 6	**Year of the study: II**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17ISHR**

Objectives of the course:
To acquaint students with basic elements of medical dietetics. After the course the student will be able to use his knowledge and skills in his dental clinical practice to prevent and treat the nutritional disorders that influence oral health.

Outcome of the course
After mastering the course the student is trained to:

- **recognise the nutritive risk factors for general and oral health**
- **identify the role of nutrients in the onset of oral diseases**
- **estimate nutrition and nutritional status of his patients**
- **make a recommendation for proper nutrition and diet therapy for his patients**

Content of the course

Lectures		teacher	No of sessions
1	Nutrients (proteins, lipids, carbohydrates); the role in the body; the content in foods	prof I. Gajic	2
2	Energy and nutrients requirements	prof I. Gajic	2
3	The consequences of insufficient energy intake and comorbidities, the impact on oral health	prof I. Gajic	2
4	Obesity and cormobidities	prof I. Gajic	2
5	The impact of obesity on oral health of children	prof I. Gajic	2
6	The impact of obesity on oral health of adults	prof I. Gajic	2
7	Vitamins (hydrosoluble); the role in the body; the content in foods; the impact on general and oral health	prof I. Gajic	2
8	Vitamins (liposoluble); the role in the body; the content in foods; the impact on general and oral health	prof I. Gajic	2
9	Minerals (macroelements); the role in the body; the content in foods; the impact on general and oral health	prof I. Gajic	2
10	Minerals (microelements); the role in the body; the content in foods; the impact on general and oral health	prof I. Gajic	2
11	Food; chemical composition; biological value; quality of food; supplements and additives in food	prof I. Gajic	2
12	Recommedations for proper nutrition; planning a daily meal; pyramid of food (types and way of using); food and nutrition policy	prof I. Gajic	2
13	Nutrition of children and women (pregnancy, lactation)	prof I. Gajic	2
14	Nutrition of elderly	prof I. Gajic	2
15	Eating disorders (incorrect eating habits; anorexia, bulimia; organic diseases and nutrition); alternative foods (vegetarianism, macrobiotic nutrition); organic food	prof I. Gajic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work			
1	Methods of estimation of population nutrition – dietary assessment	1	
2	Types of nutrition survey - nation's nutrition survey, budget food survey, tables of food content and their use	1	
3	Collective nutrition survey – demonstration of the application of the questionnaire	1	
4	Family nutrition survey – demonstration of the application of the questionnaire	1	
5	Individual nutrition survey – demonstration of the application of the questionnaire	1	
6	Assessment of nutritional status of the individuals and certain populations – biochemical testing of nutritive status	1	
7	Functional testing of nutritive status	1	
8	Anthropometric testing of nutritive status – demonstration of index usage	1	
9	Assessment of nutritional status of children using standards and reference values, assessment of nutritional status of adults using selected indices	1	
10	Clinical testing of nutritive status	1	
11	Making recommendations for nutrition for children and for women	1	
12	Making recommendations for nutrition for elderly	1	
13	Demonstration of the dental team's work in the evaluation of nutrition and nutrional status of patients	1	
14	Making a diet for obese children, demonstration of the diet application	1	
15	Making a diet for obese adults, demonstration of the diet application	1	
	TOTAL	15	

Recommended literature:

Simic B.: Medical dietetics, 4th edition, Science, Belgrade 1998. (selected chapters: pp. 16-44, 75-115, 201-230, 304-327)

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **15**	Other modes of teaching process: colloquium, seminar	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)			
Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	
Activities at practicals	27	Practical exam	
Colloquial exams	5	Oral exam	60
Seminars	5		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: INFORMATICS

Professor in charge (Name, middle initial letter, surname): Đorđe I Stratimirović

Course status (compulsory/elective): Elective

ECTS: 6	**Year of the study: 2nd**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17INFO**

Objectives of the course: The student needs to gain insight into the basic concepts of health informatics and to become familiar with the digital environment as part of a integrated and unified health information system. Through practical works, student should use various software tools needed to overcome a variety of tasks that appear in a modern dental office.

Outcome of the course After mastering the course, the student is able to:
recognizes the basic concepts in informatics and statistics,
describes the theoretical basics of IT, identify different types of data
knows how to use basic software for word, data and images processing,
apply acquired knowledge for electronic communication and use search engines,
use electronic health records system.

Content of the course

Lectures		teacher	No of sessions
1	Medical information, data, knowledge	Associate prof B. Miličić	2
2	Information and uncertainty, information entropy and quantities of information	Assistant prof Đ. Stratimirović	2
3	Binary numerical system	Assistant prof Đ. Stratimirović	2
4	Bit and byte, binary and metric prefixes	Assistant prof Đ. Stratimirović	2
5	Medical statistics - definition, basic concepts, data description	Assistant prof Đ. Stratimirović	2
6	Information sources in the electronic environment	Assistant prof Đ. Stratimirović	2
7	Internet and search engines	Assistant prof Đ.Stratimirović	2
8	Text files and word processing software	Assistant prof Đ. Stratimirović	2
9	Numerical data and spreadsheet software	Assistant prof Đ. Stratimirović	2
10	Database management software	Assistant prof Đ. Stratimirović	2
11	Presentation software	Assistant prof Đ. Stratimirović	2
12	Electronic services in health care, electronic health records system	Assistant prof Đ. Stratimirović	2
13	Electronic services in health care, medical billing	Assistant prof Đ.	2

		Stratimirović	
14	Information systems in dentistry	Assistant prof Đ. Stratimirović	2
15	Medical decision-making	Associate prof B. Miličić	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work		**The number of classes**	**Vocational practice**
1	Text processing software (MS Word) - use of the Cyrillic and Latin Serbian keyboard; filling in the questionnaire	1	
2	Text processing software (MS Word) - text formatting according to a given sample	1	
3	MS EXCEL database creation tool	1	
4	MS EXCELL. Basic concepts and practical skills: data description and the basis of statistical analysis	1	
5	MS EXCELL: tabulation of results obtained by statistical analysis	1	
6	MS EXCELL: graphical presentation of results obtained by statistical analysis	1	
7	Image processing programs (Adobe Photoshop) - color systems, resolutions, compression; work with layers	1	
8	Image Processing Software (Adobe Photoshop) - rotate and cut image	1	
9	Presentation Programs (MS Powerpoint) - making a presentation	1	
10	Presentation Programs (MS Power Point) - oral presentation of seminar work	1	
11	Electronic database of dental services- service records	1	
12	Electronic database of dental services- service recording	1	
13	Internet search engines	1	
14	Internet search of medical science bases	1	
15	Integration of acquired knowledge and its application in dental practice through a specific work assignment	1	
	TOTAL	**15**	

Recommended literature:

1. N. Mitić: Introduction to computer organization, Matematički fakultet, Beograd, 2009
2. S. Janošević, R. Dotlić, J. Erić-Marinković: Medical statistics, Medicinski fakultet, Beograd, 2008

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **15**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27		
Colloquial exams	5		
Seminars	5		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: Summer professional practice 2

Professor in charge (Name, middle initial letter, surname): Ivica Z Stančić

Course status (compulsory/elective): Compulsory

ECTS: 6	**Year of the study: second**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17LSP2**

Objectives of the course:
Introduction of basic principles of planning and independent work in removable acrylic dentures productions, removable partial denture and complex partial dentures, as well as contemporary prosthetic devices in edentoulesness and partially edentulous patients.

Outcome of the course
After summer practice student should be able to independently conduct the following procedures:

- Final laboratory procedures in complete, partial acrylic dentures and removable partial dentures production,
- specific detalis in procedures, materials, equipement, polymerization methods, tools for processing and polishing, reparing and relining procedures.

Content of the course

Practical sessions/method units and vocationl practice- single work		No of sessions
1	Anatomic impression of partially edentulous jaw. Anatomic impression cast. Individual tray types, individual tray production.	30
2	Functional impression casting, master cast preparation, wax rims producion. Production and setup of wire clasps. Specific details of teeth setup in partial acrylic denture.	30
3	Analysis of master cast od partially edentulous patients in articulator and parallelometer. Wax-up procedures. Design planning of RPD for partially edentuolness types Kenedy class 1, 2, 3, 4 and subclasses. Preparation of master cast for doubling, production of refractory mass. Waxing-up refractory cast. Design trasfer of RPD on doubler cast.	30
4	Production of wax model od RPD for different edentulousness types. Casting chanels setup and positioning in refractory mass. Annealing of refractory block, melting and casting. Cooling and breaking of refractory block. Mechanical, electrochemical processing and polishing of metal framework.	30
5	Terminal laboratory procedures in partial acrlylic and metal dentures. Modeling in wax, wire clasps fixation. Acrylic polimerization, processing and polishing. Reparation od partial arcylic dentures (acrylic plate, teeth and clasps). Reparation of partial dentures with metal framework (reparation of metal clasp, small and big connector). Specific details in procedures, materials, equipement, polimerization methods, tools for processing and polishing.	30
6	Production of removable part of complex dentures. Preparation of master cast with different fixed restorations for doubling, production of refractory cast. Waxing-up of refractory cast. Drawing design of RPD on doubler cast. Wax model production of metal framework. Casting chanels setup and positioning in refractory mass.	10

	Annealing of refractory block, melting and casting. Cooling and breaking of refractory block. Mechanical, electrochemical processing and polishing of metal framework.	
	TOTAL	160

Summer practice will take place along with teacher in charge and mentor – instructor, senior dental technican (summer practice report is filled out by mentor, and ESP number in index by teacher in charge) in laboratory of Clinic for Prosthetic Dentistry. Teacher in charge for summer practice keeps record about regular attedance and students' activities. After finished summer practice student doesn't get evaluation, but is under obligation to fill the pattern made for every student about their activities.

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: ORTHODONTIC APPLIANCES 2

Professor in charge (Name, middle initial letter, surname): Zorana Z. Stamenkovic

Course status (compulsory/elective): Compulsory

ECTS: 5	**Year of the study: 3**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17ORT2**

Objectives of the course: Basic principles of production and mechanism of action of functional orthodontic appliances

Outcome of the course: After teaching student can completely independent to realize all phases of production of activator and modification of active appliances (M blok and Twin blok). Also, they can take hold in production of some elements of other functional appliances (Balters bionator, Fränkel functional regulator, Grude appliance, Herbst appliance), keepers of space and appliances for retention.

Content of the course

Lectures		teacher	No of sessions
1	Functional orthodontic appliances – activator I	Prof. I. Scepan	2
2	Functional orthodontic appliances – activator II	Prof. I. Scepan	2
3	Functional orthodontic appliances – Balters bionator type I	Doc. Z. Stamenkovic	2
4	Functional orthodontic appliances – Balters bionator type II and III	Doc. Z. Stamenkovic	2
5	Functional orthodontic appliances – Herbst I	Prof. N. Nedeljkovic	2
6	Functional orthodontic appliances – Herbst II	Prof. N. Nedeljkovic	2
7	Functional orthodontic appliances – activator (modifications), Grude appliance	Doc. E. Markovic	2
8	Functional orthodontic appliances – Twin blok I	Doc. Z. Milosavljevic	2
9	Functional orthodontic appliances – Twin blok II	Doc. Z. Milosavljevic	2
10	Functional orthodontic appliances – M blok	Doc. E. Markovic	2
11	Keepers of space in orthodontics	Doc. A. Nikodijevic - Latinovic	2
12	Functional orthodontic appliances – Fränkel functional regulator type I	Doc. Z. Stamenkovic	2
13	Functional orthodontic appliances – Fränkel functional regulator type II, III and IV	Doc. Z. Stamenkovic	2
14	Indirect positioning of brackets in fixed appliances	Doc. Lj.	2

15	Retention in orthodontics	Prof. B. Glisic	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work			
1	Production of activator – positioning of study casts in ocludator	4	4
2	Production of activator – wire elements	4	4
3	Production of activator – positioning of wax appliance in fixator	4	4
4	Production of activator – final phase of production	4	4
5	Production of Balters bionator type I	4	4
6	Production of Balters bionator type I	4	4
7	Production of Herbst appliance	4	4
8	Production of Twin blok – wire elements	4	4
9	Production of Twin blok - acrylic elements	4	4
10	Production of M blok – wire elements	4	4
11	Production of M blok – acrylic elements	4	4
12	Production of Fränkel functional regulator type I	4	4
13	Production of Fränkel functional regulator type I	4	4
14	Production of different types of keepers of space	4	4
15	Production of thermoplastic splint and set up	4	4
	TOTAL	60	60

Recommended literature:

1. Thomas M. Graber: Dentofacial Orthopedics with Functional appliances, 1997; 161-173, 189-205, 207-222, 230-264, 268-291, St. Louis, Mosby, 1997.
2. Zorana Stamenković: Primena Frenklovih regulatora funkcije kod skeletno distalnog zagrižaja, Beograd, 2012., Zadužbina Andrejević, monografija, 26-30, 35-39.
3. S. Bishara: Textbook of Orthodontics, 2001; 343-351, Philadelphia, PA: Saunders
4. Nenad Nedeljković: Prednosti Herbst aparata u terapiji malokluzija II klase kod postadolescenata, Beograd, 2001, Zadužbina Andrejevvić, monografija, 30-39.
5. W. Proffit: Contemporary Orthodontics – fourth edition. Mosby Elsevier, 2007, 284-287; 560-564.
6. H. Pancherz: The Herbst appliance. Editorial Aguiram, 1995; 3-21.
7. H. Pancherz, S. Ruf: The Herbst appliance – Research based clinical management, Quintessence Publishing Co. Ltd. 2008, 11-30.
8. Zorana Stamenković: Upotreba Frenklovog regulatora funkcije u tretmanu skeletne klase III, Beograd, 2014., Zadužbina Andrejević, monografija 30.
9. M. Marković: Ortodoncija, Beograd, 1982; 270-277, 287-297.
10. W. Proffit i sar.: Ortodoncija, 4. Izdanje, 2010; 86-106, 414-418, 462-492, 516-524, 615-631
11. Zorana Stamenković: Upotreba Frenklovog regulatora funkcije u tretmanu skeletne klase III, Beograd, 2014., Zadužbina Andrejević, monografija, 41-44.
12. Zorana Stamenković, Vanja Raičković: Fränkel Functional Regulator in Early Treatment of Skeletal Distal and Mesial Bite (Chapter 17). Emerging trends in oral health sciences and dentistry. Edited by Mandeep Singh Virdi. Intech Open access publisher, March 2015
13. Dalija Demirović, Osnovi fiksne tehnike u ortodonciji, 2005; 177-190. Arka Pres, 2005
14. Laura Mitchell, Introduction to Orthodontics, 2013; 193-201, St. Louis, Mosby, 2013

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **60**	Other modes of teaching process:	Study research work:	**60**

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar			
Grading of knowledge (maximal number of points 100)			
Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	30
Activities at practicals	27	Practical exam	30
Colloquial exams	5	Oral exam	
Seminars	5		
Other			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: COMPLEX PARTIAL DENTURES

Professor in charge (Name, middle initial letter, surname): Ivica Z. Stančić

Course status (compulsory/elective): Compulsory

ECTS::9	**Year of the study:third**
Entry requirements:(passed exams from the previous years)	**Course code:** **ZT17PRA2**

Objectives of the course:
Students learn about different construction solutions of complex partial dentures, as well as various types of attachments and double crowns.They master the techniques of attachment placement and the process of making double crowns as part of a mobile part of a complex partial dentures.

Outcome of the course: After a complete theoretical and practical training and passing the exam, students are able for:
- manipulating with milling parallelometer and other appliances and instruments used in the technological process of complex prosthesis;
- planning and insertion techniques of attachment;
- planning and productiontechnique of double crown, as well as
planning and technique production of complex metal framework partial denture.

Content of the course

Lectures		teacher	No of sessions
1	Arrange complex partial dentures: definition, the basic concepts, types, hierarchy, parts. Planing of connecting elements in the composition of complex partial dentures.	Prof. dr Ivica Stančić	1
2	Milling fixed crowns: definition, indications, classification, characteristics, functions.	Prof. dr Ivica Stančić	1
3	Milling in prosthodontics. Tools for milling. Milling techniques.	Prof. dr Ivica Stančić	1
4	Dental attachments: general characteristics, classification, parts, roles.	Prof. dr Ivica Stančić	1
5	Slide attachment: indication, components, types, application technique: mechanism for achieving retention.	Prof. dr Ivica Stančić	1
6	Stud attachments: indication, components, types, application technique: mechanism for achieving retention.	Prof. dr Ivica Stančić	1
7	Attachments type bars, latches, screws, attachments with combined structural properties: indication, components, types, application technique: mechanism for achieving retention.	Prof. dr Ivica Stančić	1
8	Laboratory procedures for the fixed complex partial dentures with attachments.	Prof. dr Ivica Stančić	1
9	Laboratory procedures for mobile work complex partial dentures with attachments.	Prof. dr Ivica Stančić	1
10	Double Crown: definition, general characteristics, classification, components, mechanism of achieving retention. Alloys for making etched. Types of friction.	Prof. dr Ivica Stančić	1
11	Double telescope crown. Double cone crown. Double crown with extra intracoronary elements. The division, indication, mechanism of achieving retention	Prof. dr Ivica Stančić	1

12	Veneering double crown. Materials for veneering. Technique.	Prof. dr Ivica Stančić	1
13	Laboratory procedures for the complex of the fixed partial denture with double crowns: a method of making the inner and outer crowns, retention time measurement, adjustment of friction.	Prof. dr Ivica Stančić	1
14	Loboratory procedures for mobile part of complex partial dentures with double crowns. Connection of fixed and mobile parts: types, planning and creation process.	Prof. dr Ivica Stančić	1
15	Repair and relining of complex partial dentures.	Prof. dr Ivica Stančić	1
	TOTAL		**15**

Practical sessions/method units and vocationl practice- single work		No of sessions	Professional practice/*
1	Master cast for the milling crowns.	8	12
2	Forming working die, reading demarcation, preparation of working models for milling crowns modelation.	8	12
3	Milling apparatus and instruments for milling. Materials for milling. Creating copings for making different kinds of modified crowns.	8	12
4	Producing a wax model for milled crowns on molar teeth. Modeling and milling in wax.	8	12
5	Attachment type slider. Modeling crowns and milling in wax. Technique for mounting slider.	8	12
6	Attachments type anchors. Modeling crowns and milling in wax. Technique for mounting stud attachments.	8	12
7	Attachments type bars. Modeling crowns and milling in wax. Technique for mounting bar attachments.	8	12
8	Double telescope crown. Modeling internal crowns, milling in wax.	8	12
9	Double conical crown. Modeling internal crowns, milling in wax.	8	12
10	Preparation for investment, preheating and annealing, melting and casting fixed parts of the complex partial denture (dedicated fretted crown, the crown function with attachments, inner telescope crown, and cone).	8	12
11	Processing of casting and preparation for milling in metal. Milling the metal in the fixed parts of the complex partial denture (dedicated fretted crown, the crown function with attachments, inner telescope crown, and cone).	8	12
12	Making wax models outdoor telescope and conical crowns. Preparation for the venture, investment, preheating and annealing. Melting and casting. Processing and polishing castings. Adjusting the friction.	8	12
13	Create a mobile labor compensation 1.part. Prepare model for duplicating, making stunt models, making the wax model of a metal framework. Preparation for the venture, investment, preheating and annealing. Melting and casting.	8	12
14	Create a mobile labor compensation part 2. Processing and polishing the metal framework of complex Partial denture, connecting fixed and mobile part of the structure.	8	12
15	Create a mobile labor compensation 3. part. Setup teeth. Replacement wax resin. Processing and polishing complexPartial denture.	8	12
	TOTAL	**120**	**180**

* professional practice: individual work of students outside of this fund for practical classes

The content of professional practice:
Work in a dental laboratory in the process of developing different types of complex partial dentures.

Compulsory student program in the framework of practical training (if provided by the curriculum): The student is obliged to createa complex partial denture under the supervision of a mentor.

Recommended literature:
Stamenković D. Stomatološka protetika, parcijalne proteze, Interprint,
Beograd, 2006, str. 251-273.

Stančić I.Teleskop proteze – veza krune i skeleta, Zadužbina Andrejević, Beograd 2005.				
Total number of classes in active teaching:			Professional practice/independent work: **180**	
Lectures: 15	Practicals: **120**	Other modes of teaching process:		
Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar				
Grading of knowledge (maximal number of points 100)				
Pre-exam compulsory activities	**Total 40**		**Final exam**	**Total 60**
Activities at lectures	3		Written test	20
Activities at practicals	27		Practical exam	40
Colloquial exams	10		Oral exam	
Seminars				
Other				

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: FIXED RESTORATIONS 1

Professor in charge (Name, middle initial letter, surname): Vesna B. Medic

Course status (compulsory/elective): Compulsory

ECTS:9	**Year of the study:third**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17NAD1**

Objectives of the course:

- to learn and understand the theoretical aspect of dental technology
- to acquire enough skill and manual dexterity necessary to fabricate complete cast crown and metal framework (substructure) for metal-ceramic restorations

Outcome of the course After mastering the course, the student :

- is trained to prepare impression for pouring and making working cast
- knows and has technical skills to make complete cast crown
- knows and has technical skills to make metal framework for metal-ceramic restorations
- knows and has technical skills for investing and casting wax patterns
- knows and has technical skills for grinding and finishing of metal-ceramic interface

Content of the course

Lectures		teacher	No of sessions
1	Main concepts of prosthodontics, definition and objectives of fixed prostodhntics	Prof K.Obradovic - Djuricic	1
2	Classification and types of fixed restorations: temporary (interim) and permanent restorations Indication and contraindication for fixed restorations, dagnosis and treatment planning	Prof K.Obradovic - Djuricic	1
3	Study models, diagnostic wax-up, custom tray fabrication	Assistant prof V. Medic	1
4	Principles of tooth preparation: biological, mechanical and esthetic considerations	Prof S. Dodić	1
5	Impression techniques	Prof S. Dodić	1
6	Checking quality of impression, choosing of materials and technique for cast and die system, impression pouring and preparation working cast with removable die	Assistant prof V. Medic	1
7	Producing a wax patterns of full cast crown, full veneer crown, partial veener crown and cast post and core	Assistant prof V. Medic	1
8	Fundamentals of spruing, investing and casting	Assistant prof V. Medic	1
9	Common causes of casting failure, finishing the cast restoration (objectives and procedure)	Assistant prof V. Medic	1
10	Definition and general characteristics of fixed partial denture (FPD), components of FPD, material for FPD,	Assistant prof V. Medic	1
11	Biomechanical and esthetic considerations, hygienic requirements of FPD	Assistant prof V. Medic	1

12	Metal-ceramic restorations, evolution and advantages of MCR, Principles of metal substructure (framework) design	Assistant prof V. Medic	1
13	Producing a wax patterns of metal substructure(framework) for: maxillary anterior and posterior FPD and mandibulary posterior FPD	Assistant prof V. Medic	1
14	The use of dental surveyor in fixed prosthodonics: for surveyed diagnostic cast and designed fixed restorations	Assistant prof V. Medic	1
15	Retainers for partial removable denture, Fixed partial denture with nonrigid conectors	Assistant prof V. Medic	1
	TOTAL		15

Practical sessions/method units and vocationl practice- single work		No of practical sessions	No of vocational practice
1	Preparing primary impression for pouring and making diagnostic cast, model analysis, custom tray fabrication	8	12
2	Impression pouring and preparation working cast with removable die,sectioning removable dies, highlight margin with pencil	8	12
3	Maunting casts on anarticulator	8	12
4	Producing a wax pattern of full cast crown (crown 16):applaying die spacer to allow room for the luting cement, coating the die with die lubricant, fabrication of a thin coping by heated resin sheets	8	12
5	Modeling the proximal contacts and vestibular and oral contours of the wax pattern, waxing of the occlusal surface to establish cups-marginal ridge occlusal scheme.	8	12
6	Producing a wax pattern of full veneer crown and FPD : applaying die spacer to allow room for the luting cement, coating the die with die lubricant, fabrication of a thin coping by heated resin sheets.	8	12
7	Tooth 21- waxing the full veneer crown to complete anatomic contour	8	12
8	FPD 11-13 - waxing the three-unit anterior FPD to complete anatomic contour Pontic fabrication (pontic-ridge contact), connector fabrication	8	12
9	Fabricaton labial and incisal matrix (slicone key) to assist with evaulation of the cut –back procedure	8	12
10	Full veneer crown 21 – preparing guiding grooves in the area to be veneered, removing wax from between the grooves.	8	12
11	FPD 11-13-Making depth cuts around perifery of the cut-back area and removing wax islands in between	8	12
12	Producing wax pattern of metal substructure for mandibulary posterior metal-ceramic FPD	8	12
13	Spruing wax patterns and investing	8	12
14	Meltin and casting	8	12
15	Finishing and polising fulcast crown, prepartion metal substructure for ceramic	8	12
	TOTAL	120	180

Recommended literature:

1. Trifunović D, Radlović S, KandićM, Nastić M, Petrović A, Krstić M, Stanišić Sinobad D, Prosthodonics-precilinic, page: 15-68, 86-100, 108-116, 127-177, Belgrade 1995
2. Stamenkovic D, Dental Materials, book 3, pages:87-184, 276-288 DATA STATUS,Belgrade , 2015
3. Ptric Naylor W. Introductio to metal ceramic techonology , pages: 43-113, Quintessence publishing CO,

Inc 2009

4. Stanišić-Sinobad D: Basics of gnathology, pages:229-294, 429-438, Belgrade , BMG 2001

Total number of classes in active teaching:				Professional practice/independent work: **180**
Lectures: **15**	Practicals: **120**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	20
Activities at practicals	27	Practical exam	40
Colloquial exams	7	Oral exam	
Seminars			
Manuel dexterity	3		

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: FIXED RESTORATIONS 2

Professor in charge (Name, middle initial letter, surname): Vesna B. Medic

Course status (compulsory/elective): Compulsory

ECTS:9	**Year of the study: third**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17NAD2**

Objectives of the course:

- to learn and understand the theoretical ascpect of dental technology
- to acquire enough skill and manual dexterity necessary to fabricate metal-ceramic and all ceramic restorations

Outcome of the course After mastering the course, the student :

- is trained to prepare impression for pouring and making working cast for all ceramic restorations
- knows and has technical skills to make metal-ceramic restorations
- knows different ceramic systems and has technical skills to make all ceramic restorations

Content of the course

Lectures		teacher	No of sessions
1	Metal-ceramic restorations: properties of dental ceramic for the metal-ceramic systems, instruments and equipment for applaying ceramic on metal substructure	Assistant prof V. Medic	1
2	Preparation of the metal substructure for ceramic application, opaquing the metal substructure	Assistant prof V. Medic	1
3	Basic techniques for applaying dentin (body) and enamel ceramic: mixing ceramic powders with recommended liquid, building the veneer to anatomic contour, ceramic condensation, firing procedure	Assistant prof V. Medic	1
4	Adjusing, contouring and finishing metal- ceramic restorations, preparation for correction firing (bakes), stainig and glazing (auoglazing, overglazing)	Assistant prof V. Medic	1
5	Making ceramic labial margins	Assistant prof V. Medic	1
6	Specificity of production metal-ceramic FPD	Assistant prof V. Medic	1
7	All ceramic restorations: Indication and contraindication, dagnosis and treatment planning, principles of tooth preparation, impression techniques, preparation working cast with removable die	Prof S. Dodić	1
8	Dental ceramic for all ceramic restorations (all ceramic systems), historical background, All ceramic systems1: composition and properties, classification according microstructure	Prof K.Obradovic - Djuricic	1
9	All ceramic systems2	Prof K.Obradovic - Djuricic	1
10	All ceramic systems 3	Prof K.Obradovic - Djuricic	1

11	Clinical indication for all ceramic restoration according principal cristal phase and/ or matrix phase	Prof K.Obradovic - Djuricic	1
12	Specificity of production all cermic crowns and bridges	Assistant prof V. Medic	1
13	All ceramic inlay,onlay, veneer	Assistant prof V. Medic	1
14	Fabrication procedure of all ceramic restorations by slip-cast technique	Assistant prof V. Medic	1
15	Fabrication procedure of all ceramic restorations by heat-pressed technique	Assistant prof V. Medic	1
	TOTAL		15

Practical sessions/method units and vocationl practice- single work		No of practical sessions	No of vocational practice
1	Metal finishing procedure: **adjusting and finishing procedures, air abrasion, steam cleaning**	8	12
2	Oxidizing and degassing, air abrasion and steam cleaning	8	12
3	Opaque porcelain application: first application being with thin “wash” and firing, application scond layer and firing	8	12
4	All ceramic margin fabrication (crown: 21), firing procedure	8	12
5	Ceramic application- dentin and enamel (crowns: 21,16), firing procedure	8	12
6	Ceramic application- dentin and enamel on metal substructure (framework)for maxillary anterior FPD, firing procedure	8	12
7	Ceramic application- dentin and enamel on metal substructure (framework)for mandibulry posterior FPD, firing procedure	8	12
8	Internal characterization, adjusment interproximal contact, contouring labilal surface, (crowns :12,16) second firing	8	12
9	Internal characterization, adjusment interproximal contact, contouring labilal surface,(maxillary anterior FPD) second firing	8	12
10	Internal characterization, adjusment interproximal contact, contouring labilal surface, adjustment occlusion (mandibulary posterior FPD) second firing	8	12
11	**Grinding to reveal the desired anatomy and occlusion.** examine the crowns from all views (labial, palatal, incisal, mesial, and distal)	8	12
12	**Grinding to reveal the desired anatomy and occlusion.** examine the FPD from all views (labial, palatal, incisal, mesial, and distal)	8	12
13	Glazing and surface characterization of crowns 21,16	8	12
14	Glazing and surface characterization of maxillary anterior FPD	8	12
15	Glazing and surface characterization of mandibulary anterior FPD	8	12
	TOTAL	120	180

Recommended literature:

1. Trifunović D, Radlović S, KandićM, Nastić M, Petrović A, Krstić M, Stanišić Sinobad D, Prosthodonics-precilinic, page:100-108, 117 -123, Belgrade 1995
2. Stamenkovic D, Dental Materials, book 3, pages:42-49, 191-226 DATA STATUS,Belgrade , 2015
3. Ptric Naylor W. Introductio to metal ceramic techonology , pages: 115-170, Quintessence publishing CO, Inc 2009
4. Stanišić-Sinobad D: Basics of gnathology, pages:229-294, 429-438, Belgrade , BMG 2001
5. Obradović Djuričić K , Todorović A, Dodić S, Medić V: All ceramic systems in dental practice,School of

dental medcine, Belgrade 2013

Total number of classes in active teaching:				Professional practice/independent work: **180**
Lectures: **15**	Practicals: **120**	Other modes of teaching process:	Study research work:	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	20
Activities at practicals	27	Practical exam	40
Colloquial exams	7	Oral exam	
Seminars			
manuel dexterity	3		

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: MAXILLOFACIAL PROSTHODONTICS

Professor in charge (Name, middle initial letter, surname): Vojkan M. Lazic

Course status (compulsory/elective): Compulsory

ECTS: 2	**Year of the study: third**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17 MAKS**

Objectives of the course: To train the dental technicians in planning and making dental prostheses and facial dentures, making intermedia and definite splinters in orthognathic surgery and in traumatology

Outcome of the course :
After mastering the course, the student is able to:
- master the technique of making acrylic splints at the fork bone fracture;
- master the planning and technique of making a denture and a denture obturator;
- mastering the planning and technique of making a prosthesis dentist with palate cleft;
- mastering the planning and technique of making facial dyes from acrylics in color and silicone.

Content of the course

Lectures		teacher	No of sessions
1	Bone and jaw fractures and tooth fractures - epidemiology, first aid, diagnosis, soft tissue injuries, bone tissue injury. Fractures: the mechanism of origin, division. Fractures of the lower jaw - corners, symphysis, corpus, ramus, muscular extension, articular attachment. Fractures of the middle mass of the face - symptomatology, diagnostics. Fractures of the zygomatic bone and the zygomatic arc, orbital fractures - etiology, symptomatology, diagnostics, classification. Fractures of the alveolar extension. Fractures the fork in children. Fractures of the inferior and atrophic jaws -theology, symptomatology, diagnostics. Tooth injury: fracture - crowns / roots, luxation, traumatic teeth extraction - etiology, symptomatology, diagnostics.	Milan Petrovic	2
2	Surgical and conservative treatment of facial and jaw bone fractures. Lower jaw breaks - surgical and conservative treatment. Treatment of the inferior jaw fracture. Application of wire embroidery and splinters. Fractures of the middle mass of the face - conservative and surgical treatment. Fractures of the zygomatic bone and the zygomatic arc, the orbital floor orifices - the methods of surgical treatment. Fractures of the alveolar extension. Fractures the fork in children. Fractures of the infertile and atrophic jaw - conservative and surgical treatment. Tooth injury - conservative treatment with wires.	Milan Petrovic	2
3	Inborn, developmental and acquired deformities of the jaw - division (isolated and bimaxillary), etiology, diagnosis, cephalometric analysis, model analysis. Mandibular prognosticism - (prognanaya mandibula, progenia) methods of surgical treatment. Isolated deformities of the lower jaw - a projection of mandibular incisors, mandibular retrognatism (retrognatation - hypolysis of the mandible), microgenia (retrogen -	Milan Petrovic	2

	small chin), laterognatia (one-sided hyperplasia, one-sided hypoplasia. Surgical and conservative treatment.		
4	Bimaxillary deformity of the jaw - pronounced mandibular prognathism, deep bite, bimaxillary prognathism (bimaxillary protrusions), elongated chest syndrome ("Thelongface syndrome"), open bite (apertognathia), shortened face ("Theshortface"), maxillary asymmetry (hyperplasia or hypoplasia). Rashes of lips, palates and faces - clefts of primary and secondary palatalis (cheilognatho-palatoshisis). Aetiology and mechanism of cleft formation. Classification and clinical characteristics of cleft. Chronology of treatment and methods of surgical as well as conservative treatment of cleft	Milan Petrovic	2
5	Jaw and facial tumors - definition of tumors, nomenclature, etiology, incidence. Diagnosis: anamnesis, clinical examination, diagnostic procedures (laboratory findings, X-ray, angiography, echography, scintigraphy, CT, NMR, biopsy). Basic characteristics of tumors, differences between benign and malignant tumors. Principles of treatment of tumors. Most common tumors of the oropharyngeal region. Surgical therapy.	Milan Petrovic	2
6	Upper jaw defects and postresectional treatment with obturator prostheses.	Igor Djordjevic	2
7	Velopharyngeal defects and postresectional treatment with obturator prostheses. The lifters of the velopharingeal segment ("palatal lift" and the moth dental obturator).	Igor Djordjevic	2
8	Special forms of denture obturator: skeletal denture obturators.	Igor Djordjevic	2
9	Implant retained obturator prostheses.	Vojkan Lazic	2
10	Tongue defects, floor of the mouth defects and the lower jaw body. Postresectional therapy.	Igor Djordjevic	2
11	Nasal defects. Postresectional therapy.	Vojkan Lazic	2
12	Orbital defects. Postresectional therapy.	Vojkan Lazic	2
13	Auricular defects. Postresectional therapy.	Vojkan Lazic	2
14	Implant retained facila prostheses. Craniofacial implantology.	Vojkan Lazic	2
15	Materials for fabrication of maxillofacial prostheses	Igor Djordjevic	2
	TOTAL		**30**

Practical sessions/method units and vocationl practice- single work			
1	Metal splints: wires - with Winter spins for intermaxillary fixation (adaptation of models on the side); without spear - making a splint rail for fixing loose teeth on models. Reposition on the working model (dislocation inside the tooth arch) and adaptation of the metal splints.	2	4
2	Metal splints: the production of acrylate splints at the fracture of the carcass and dentate jaw: acrylate "CAP" splint (loose teeth), “Statut” acrylate splint, dental splint type of incomplete dentures (for fracture of jaw with disturbed MRL) and a combination of acrylate splint and metallic splint after “Winter”.	2	4
3	Congenital, developmental and acquired deformities of the jaw: preoperative planning on modeling for studying, imprinting and spilling m / s, transferring m / s into an articulator using a facial arc and a CR mandible registry, m / s analysis in the articulator with the diameter and horizontal cutting of the model; creation of intersplint and definitive splint. Acrylic lace chin.	2	4
4	Obturator prosthesis : preoperative planning, models for studies, preparation of m / s and production of interim acrylate plates; the	2	4

	impression of the maxillary defect and the outflow of the working model from the hard gypsum, the preparation of the working model and the production of an individual impression spoon.		
5	Obturator prosthesis: modeling the obturator plate in wax for design; kivetting and polymerisation with processing, setting a bumpy thigh, transferring the model into an articulator, teeth setting, kivetting and polymerisation, treatment and polishing of the acrylic denture obturator.	2	4
6	A special shape of the obturator prosthesis : a removable partial denture obturator prosthesis with metal base, an implant retained obturator prosthesis; obturator prosthesis with velopharyngeal obturation segment (palatinal "lift" prosthesis and meatal dentures).	2	4
7	Rashes of lips, palates and faces clefts - prostheses for palate clefts, stimulators.	2	4
8	Facial defects - nose: impression, making a moulage, making a model from impression with craniofacial implant position transfers, moulage preparation, and modeling in wax for design.	2	4
9	Facial defects - nose: sculpting in wax, final surface modeling and preparation for kivetting.	2	4
10	Facial defects - eye and peripheral tissue: impression, hard gypsum molding – making a moulage, making a model from impression with craniofacial implant position transfers, moulage preparation, centering the eyeball and sculpting in wax.	2	4
11	Facial defects - eye and peribular tissue: sculpting of eyelids and surrounding lost tissue in wax for design. Surface texture and definitive modeling before kivetting.	2	4
12	Facial defects - ear: impression, making a model of the hard gypsum - moulage, making a model from impression with craniofacial implant position transfers, moulage preparation, impression of a ear shell in the alginate, making a wax model of the ears shells; production of a silicone key - positioners, production of a surgical stent for the implantation of craniofacial implants.	2	4
13	Facial defects - ear: final sculpting of an ear shell in wax, surface texture and definitive modeling before kivetting. Creation of acrylate base for retention on implants.	2	4
14	Facial Defects: Completing unfinished sculpting of facial prostheses in wax. Preparation of acrylate in color, cuvetting and polymerization. Mixing silicone with color for intrinsic coloration for facial prosthesis and kivetting.	2	4
15	Facial Defects: Finishing the acrylic facial dentures and delivery to patient. Extrinsic coloration of silicone dentures and color fixation. Delivery of facial prostheses to patient. Retention through the glasses frame, use of skin athesives or retention through craniofacial implants.	2	4
	TOTAL	**30**	**60**

Recommended literature:

1. Dimitrijević Branislav, Stefanović Predrag: Traumatologija i maksilofacijalna protetika – praktikum, NIKI, Beograd, 1992.
2. Dimitrijević Branislav : Maksilofacijalne proteze i govor, Dečje novine, Forum Novi Sad, 1984.
3. Dimitrijević Branislav : Proteze lica, Izdavačko propagandna radna organizacija „Partizan", Beograd, GRO „Proleter" Ruma 1986.

<table>
<tr><td colspan="4">Total number of classes in active teaching:</td><td rowspan="2">Professional practice/independent work: 60
Within the professional practice, the student independently performs activities that he has previously mastered through active teaching while supervising the responsible teacher from the subjects and mentors (the person responsible for practical teaching in the laboratory).</td></tr>
<tr><td>Lectures:
30</td><td>Practicals:
30</td><td>Other modes of teaching process:</td><td>Study research work:</td></tr>
<tr><td colspan="5">Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar</td></tr>
<tr><td colspan="5">Grading of knowledge (maximal number of points 100)</td></tr>
<tr><td>Pre-exam compulsory activities</td><td colspan="2">Total
40</td><td>Final exam</td><td>Total
60</td></tr>
<tr><td>Activities at lectures</td><td colspan="2">3</td><td>Written test</td><td>60</td></tr>
<tr><td>Activities at practicals</td><td colspan="2">27</td><td></td><td></td></tr>
<tr><td>Colloquial exams</td><td colspan="2">10</td><td></td><td></td></tr>
<tr><td>Seminars</td><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Other</td><td colspan="2"></td><td></td><td></td></tr>
</table>

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: DENTAL RESTORATIONS ON IMPLANTS

Professor in charge (Name, middle initial letter, surname): Aleksandar B. Todorović

Course status (compulsory/elective): Compulsory

ECTS:5	**Year of the study:3rd**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17ZNIM**

Objectives of the course:
For students to meet and overcome a principles and modalities in the management of patients with dental restorations on implants.

Outcome of the course
After the course, students are enable to:
- master implant therapy planning;
- master the technique of making radiological and surgical splint;
-master the technique of making temporary restorations;
- mastering the specificity of the impression and the development of the working model in implantology;
- master the technique of selection and processing of abatments;
- master the technique of making fixed and conditionally fixed dental restorations on the implants;
- master the technique of making hybrid dental restorations on implants;
- master the basics of fabrication of epithesis on craniofacial implants

Content of the course

Lectures-3rd semestar		teacher	No of sessions
1	Introduction to implantology, implant systems, vocabulary	Aleksandar B. Todorović	2
2	Implant therapy planning	Aleksandar B. Todorović	2
3	Analysis of model for studies, types of diagnostic models, their design and significance	Aleksandar B. Todorović	2
4	Planning of biomechanics and dental restorations on implants and materials in implantology	Aleksandar B. Todorović	2
5	Production of radiological and surgical 2D and 3D splints	Aleksandar B. Todorović	2
6	Surgical implantation, osseointegration and soft tissue healing of implants. Comparative analysis of anatomy, histology and physiology of periodontal and peri-implant tissue	Aleksandar B. Todorović	2
7	Temporary abatments and restorations: the significance and methods of forming the emergence profile of restorations	Aleksandar B. Todorović	2
8	Impression in implant prosthodintics, laboratory elements and causes of errors. Specificity of casting impressions and fabrication of working models.	Aleksandar B. Todorović	2
9	Analysis of the working model, selection of abatments and its individualization.	Aleksandar B. Todorović	2
10	Prosthetic implant loading protocols: the specificity of designs and the development of fixed dentalrestorations on implants.	Aleksandar B. Todorović	2
11	Specificity of making conditionally fixed compensations for implants.	Aleksandar B. Todorović	2
12	Specificity of design and production of hybrid dental restorations on implants.	Aleksandar B. Todorović	2
13	Specificity of design and development of mobile dental restorations on implants	Aleksandar B. Todorović	2

14	Try in of dental implant restorations, analysis of errors and their consequences. Delivery, maintenance and repair of dental restorations on implants.	Aleksandar B. Todorović	2
15	Modalities of occlusal relationships in restorations on implants. The most common complications.	Aleksandar B. Todorović	2
	TOTAL		30

Practical sessions/method units and vocationl practice- single work		**Number of classes**	**Vocationl practice**	
1	Introducing elements of implantology systems.	3	4	
2	Analysis of study models in the articulator.	3	4	
3	Creating a diagnostic model.	3	4	
4	Production of radiological stent.	3	4	
5	Production of surgical stent.	3	4	
6	Temporary restorations- fabrication techniques.	3	4	
7	Pouring out impressions and creating work models with artificial gingiva.	3	4	
8	Work model analysis.	3	4	
9	Choice and individualization of abatments.	3	4	
10	Creation of fixed dental restorations on implants.	3	4	
11	Production of conditionally fixed dental restorations on implants.	3	4	
12	Creation of hybrid dental restorations on implants 1	3	4	
13	Creation of hybrid dental restorations on implants 2	3	4	
14	Creation of mobile dental restorations on implants 1	3	4	
15	Creation of mobile dental restorations on implants 2	3	4	
	TOTAL	**45**	**60**	**60**

Content of professional practice:

Within the framework of professional practice, the student independently performs activities that he has previously mastered through active teaching, with the supervision of responsible teachers and mentors (the person responsible for practical teaching in the laboratory.

Compulsory student program in the framework of practical teaching (if it is foreseen by plan and program: Student exercises demonstrated skills.

Recommended literature:

Jurišić M, et al. Oral implantology, School of Dental Medicine Belgrade, 2006, selected chapters on pages : 27-39;79-97; 137-195; 207-219; 233-253.

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **30**	Practicals: **45**	Other modes of teaching process:	Study research work: **60**	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27	Practical exam	
Colloquial exams	10	Oral exam	
Seminars			
Other			

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**			
Level of studies: Basic vocational studies – 1st level			
Course: HIGH TECHNOLOGY IN DENTAL LABORATORY *CAD/CAM*			
Professor in charge (Name, middle initial letter, surname): Aleksandar B Todorovic			
Course status (compulsory/elective): Compulsory			
ECTS: 7		**Year of the study:Third**	
Entry requirements:(passed exams from the previous years)/		**Course code:** **ZT17VTEH**	
Objectives of the course: is that students learn the basic principles and modalities of working with high computer technology in the dental laboratory.			
Outcome of the course: After mastering the course, the student is able to: knows the application of high technologies in dentistry, familiar with the operation and development of the basic principles of computer fees, making dental restorations using computer technology.			
Content of the course			
Lectures		teacher	Number of lectures
1	High technology in dental laboratory: basic concepts and considerations.	Aleksandar B. Todorović	1
2	*CAD/CAM technology*: deffinition, history, area of application, components and way of functioning.	Aleksandar B. Todorović	1
3	Computer aided inspection.	Aleksandar B. Todorović	1
4	Computer aided design.	Aleksandar B. Todorović	1
5	Application of computer technology in the analysis of occlusal contacts and lower jaw movements. Basic working principles of the virtual articulators.	Aleksandar B. Todorović	1
6	The method of designing occlusal surfaces of dental restorations using the CAD/CAM system.	Aleksandar B. Todorović	1
7	Computer aided manufacturing.	Aleksandar B. Todorović	1
8	Connection and impact of the CAD/CAM systems with selection of machine-workable materials.	Aleksandar B. Todorović	1
9	The characteristics of copy-milling CAD/CAM systems.	Aleksandar B. Todorović	1

10	Specificity of a particular CAD / CAM systems.	Aleksandar B. Todorović	1
11	The components, software, advantages and limitations of 3D navigational implantology.	Aleksandar B. Todorović	1
12	3D navigational implantology, specificity in laboratory production of radiological and surgical stents.	Aleksandar B. Todorović	1
13	Galvanization and its application: definition, basic concepts, phases in applications, guidelines in the production of galvano-ceramic fixed dental restorations.	Aleksandar B. Todorović	1
14	Application of laser technologies in the dental laboratory: definition, characteristics, division and application.	Aleksandar B. Todorović	1
15	One time production of dental restorations.	Aleksandar B. Todorović	1
TOTAL			15

Practical sessions/method units and vocationl practice- single work *		**Number of lectures**	**Professional practice***
1	Working with digital instruments for tooth color shade determination.	3	4
2	Characteristics in making working model. Materials used in computerized dentistry.	3	4
3	Digital impression, malfunctions, storage of digital data.	3	4
4	Computer aided design: introduction in the software, creating a virtual models, specificity designs of restorations made of different types of materials.	3	4
5	Computer aided design: core of crown.	3	4
6	Computer aided design: bridge substruction.	3	4
7	Computer aided design of dental restorations.	3	4
8	Preparation for milling and working with numerically controlled milling machines. Final phases in making dental restorations.	3	4
9	Training in working with copy - milling systems.	3	4
10	Production of radiological stent for 3D navigational implantology.	3	4
11	Introduction in to 3D navigation software for implantology. Basics of planning.	3	4
12	Production of a surgical stent for 3D navigational implantology.	3	4
13	Galvano technique. Galvanization in making of dental restorations.	3	4
14	Laser working in dental laboratory.	3	4
15	Production of dental restorations with specific design (attachments, double crowns). One time production of dental restorations.	3	4

TOTAL	45	60

* Professional practice: independent student work outside of the foreseen fund for practical teaching.

The content of professional practice: In the context of professional practice, the student independently performs activities that he has previously mastered through active satiation, with the supervision of the responsible teacher and mentor (the person responsible for practical teaching in the laboratory).

Compulsory student program in the framework of practical training (provided by the curriculum): Student exercises demonstrated skills.

Recommended literature:

1. Baltzer A. *CAD/CAM* and all ceramics ,Quintessenz Verlags-GmbH, Медиа Оглед Доо, Zarреб, 2009. PAGE:31-38; 61-81; 83-93;95-119;155-190; 255-260;213-230;305-326.
2. **Stamenkovic D**. Building dental materials, achievements and perspectives, Belgrade 2007 Scientific monograph. Pages 187- 205.
3. Todorovic A. Application of CAD / CAM technology in a prosthodontics. Professional monograph. Belgrade 2005 pages: 23-96; 97-111.

Total number of classes in active teaching:			**Professional practice/independent work: 60**
Lectures: 15	**Practicals: 45**	**Other modes of teaching process:**	

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximal number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	3	Written test	60
Activities at practicals	27		
Colloquial exams	10		
Seminars			

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: ORAL HEALTH PROMOTION AND BASICS OF COMMUNICATIONS

Professor in charge (Name, middle initial letter, surname): Ivanovic D. Mirjana

Course status (compulsory/P): Elective

ECTS:2	**Year of the study:3 rd**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17 COMU**

Objectives of the course:
After completion of theoretical instruction, the student will be able acquiring knowledge in the field of oral health promotion and training for interpersonal skills in communications with the patient.

Outcome of the course
After mastering the course in this course, the student will be able to:
- knows the ways of improving oral health through preventive activities;
- carry out health and safety measures and methods;
- improve the interaction between the healthcare worker and the patient.

Content of the course

Lectures		teacher	No of sessions
1	The way of life and the oral health of citizens	Prof M.Ivanovic	3
2	Models of behavior in the promotion of oral health	Prof M.Ivanovic	3
3	Learning components in oral health programs	Prof M.Ivanovic	3
4	Content of the interaction between the healthcare worker and the patient	Prof M.Ivanovic	3
5	Self-motivation motivation in the promotion of oral health	Prof M.Ivanovic	3
6	Community work methods aimed at promoting oral health	Prof M.Ivanovic	3
7	Interdisciplinary and multisectoral approach in the promotion of oral health	Prof M.Ivanovic	3
8	Effective communication in the promotion of oral health	Prof M.Ivanovic	3
9	Social interactions in the oral health care system	Prof M.Ivanovic	3
10	Elements of communication of subjects in interaction	Prof M.Ivanovic	3
11	Dispersion of information in the communication process	Prof M.Ivanovic	3
12	Motivation for effective communication - element of quality of dental care	Prof M.Ivanovic	3
13	Barriers and communication impediments	Prof M.Ivanovic	3
14	Communication and information technology	Prof M.Ivanovic	3
15	Practical recommendations for successful communication	Prof M.Ivanovic	3
	TOTAL		45

Recommended literature:
1. Berger D. i sar.: Zdravstvena psihologija, Društvo psihologa Srbije, Beograd 1997.
2. Carevic M. Ivanovic M i sar: Preventivna stomatologija,Stomatološki fakultet u Beogradu, Beograd 2016. VI Poglavlje (Promocija oralnog zdravlja)

Total number of classes in active teaching:				Professional practice/independent work:
Lectures: **45**	Practicals:	Other modes of teaching process:	Study research work:	
Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar				
Grading of knowledge (maximal number of points 100)				
Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**	
Activities at lectures	30	Written test	60	
Activities at practicals		Practical exam		
Colloquial exams	7	Oral exam		
Seminars	3			
Other				

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course: GERODONTOLOGY

Professor in charge (Name, middle initial letter, surname): Ljiljana Đ., Tihaček Šojić

Course status (compulsory/elective): Elective

ECTS: 2	**Year of the study: 3rd**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17GERO**

Objectives of the course:
To educate students in basic theories of gerodontology, to train them to correctly recognize overall as well as oral status of elderly patients, to enable students to implement certain surveys and interventions important for a dentist in an everyday work

Outcome of the course
After mastering the course, the student is able to perform the following:
- Interpret the diagnosis and establish the adequate therapeutical plan for dental and prosthetic care with both functionally independent and dependent elderly patients.
- Maintain proper oral hygiene with functionally independent and dependent elderly patients as well as perform proper preventive measures.

Content of the course

Lectures		teacher	No of sessions
1	Biological aspects of aging: General terms about health and aging. Aging and aging problems. Aging Theory: The biological basics of aging. Physiology of aging. Immunology and aging.	Prof Ljiljana Tihaček Šojić	3
2	Changes in teeth, oral mucous membrane, periodontium and salivary glands during aging. Sense of smell and aging. Sense of taste and aging. Bone tissue aging. Changes in the osteomuscular structures of the stomathognatic system.	Prof Ljiljana Tihaček Šojić	3
3	Health care of elderly people: Demography and epidemiology of aging. Human life span. Contemporary organization of general and dental health care for elderly patients. Primary health care program. Specialized geriatric services. Hospital geriatrics.	Assistant prof. Svetlana Jovanović	3
4	Psychological and behavioral aspects of aging: Psychological perspectives of aging; Influence of the environment and society. Role of dentists, oral hygienists and dental technicians in an interdisciplinary team. Communication with older patients.	Assistant prof. Svetlana Jovanović	3
5	Medical Aspects of Aging: Clinical assessment of the overall health of an eldrly patient. General diseases of old people. Mental disorders in older population. Assessment and importance of cognitive status in dental rehabilitation.	Prof Nebojša Despotović	3
6	Connection between general and oral health in elderly patients. Medical therapy and its importance in geriatrics. Oral manifestations of systemic diseases and side effects of drugs.	Prof Ljiljana Janković	3
7	The importance and role of oral hygienists in the periodontal treatment of elderly patients.	Prof Ljiljana Janković	3
8	The importance and role of oral hygienists in endodontic treatment in elderly patients. Various modes of prosthetic treatments in endodontically treated teeth.	Prof Đurica Grga	3

9	Quality of life of elderly patients: Establishing the influence of oral health to the quality of life of elderly patients. Indices for grading the quality of life.	Prof Ivica Stančić	3
10	Mastication and diet of older people. Nutritional status of older patients. The important impact of prosthetic treatment on the nutritional status and mastication of the elderly.	Prof Ivica Stančić	3
11	Planning prosthetic treatments in elderly patients. The importance and role of oral hygienists in prosthetic therapy of edentulous elderly patients.	Prof Ljiljana Tihaček Šojić	3
12	Significance and role of oral hygienists in prosthetic therapy of toothless elderly patients. Standard and complex partial dentures. Supradental prosthesis in elderly patients.	Prof Ljiljana Tihaček Šojić	3
13	The importance and role of oral hygienists in prosthetic therapy of older patients with fixed prosthodontics.	Prof Ivica Stančić	3
14	The importance and role of oral hygienists in planning and prosthetic rehabilitation of functionally dependent older patients.	Prof Ivica Stančić	3
15	The importance and role of oral hygienists in oral surgery and implantology in gerontologic patients. Maxillofacial surgery and older patients.	Prof Ljiljana Stojčev Stajčić	3
	TOTAL		**45**

Recommended literature:

Tihaček-Šojić LJ., Stančić I.: Stomatološka gerontoprotetika, Koraci, Kragujevac, 2009.

Stamenković D.: Stomatološka protetika, parcijalne proteze, Interprint, Beograd, 2006.

Total number of classes in active teaching:

Lectures:	Practicals:	Other modes of teaching process:	Study research work:
45			

Methods of teaching process: Lectures, practical sessions, group presentations, colloquiums, seminar

Grading of knowledge (maximum number of points 100)

Pre-exam compulsory activities	**Total 40**	**Final exam**	**Total 60**
Activities at lectures	30	Written test	60
Activities at practicals		Practical exam	
Colloquial exams	7	Oral exam	
Seminars	3		
Other			

Study programme: **Basic vocational studies Dental Tehnician Prosthodontist**	
Level of studies: Basic vocational studies – 1st level	
Course: FINAL PROFESSIONAL PAPER	
Professor in charge (Name, middle initial letter, surname): Ivica Z. Stančić	
Course status (compulsory/elective): Compulsory	
ECTS:10	**Year of the study:third**
Entry requirements:(passed exams from the previous years) /	**Course code:** **ZT17DIPL**
Requirement: student can choose theme for final professional paper from courses he/she passed and which refer to rehabilitation of edentulous and partially edentulous patients with removable and fixed appliances, as well as therapy of dental arches irregularity in sagittal, trasversal and vertical direction. Student is obligated to pass all courses on study programme basic vocational studies dental tehnician prosthodontist in order to pass final professional paper. Student needs to complete final professional paper for at least 3 weeks but no longer than 6 months from the application date.	
Objectives of the course: Training students for utilizing the most modern techology and resources which will be applied during actual themes of final paper. In that way student shows that he has acquired the foreseen level of professional competence and maturity in the field he/she has chosen for final paper.	
Outcome of the course After passing the final professional paper student is capable to idenpedently use and aply knowledge acquired during the studies, and to systematically approach to solving problems. Student acquires experience which is applicable in practice during process of solving problems in profession. By choosing the theme and passing the final paper, dental technician prosthodontist is partally oriented in their practical work and permanent education.	
General content: Chiefs of courses are mentors who define paper title and tasks implemented into final paper at the beginning of academic year, after that studentd choose themes. They are obligated to define with students future final paper and students need to do it idenpedently. Work on final paper can be started in the beginning of sumer semester if student has passed the course from the theme of the paper. During the practical phase of the final paper, student is obligated to photograph every phase and to present these photos in the written form of the paper. Final professional paper has folowing elements: Introduction, General part (literature presentation of the problem), Results, Discussion, Conclusion, Abstract in English and Literature. On the defense of the final paper, record is kept which contents paper title, candidate name, names of the professional board, location, the time of the defense and the grade. Defensed final paper is evaluated with grades 6 to 10. Student who hasn't pass the final paper can aks to be proved another theme, usually from different field and with the same procedure as the first one. **Methods of performing**: Practical part of final paper is performed in dental laboratory Clinic of Prosthetic Dentistry and Clinic for Orthodontics, University of Belgrade. Defense of the final paper is oral and public. It is performes in above mentioned Clinics as well. During the oral defense of final paper, multimedial presentation can be used (computer presentation, slides, video presentations…) **FINAL EXAM:** 5 to 10. Maximal points is 100	

Study programme:
Basic vocational studies Dental Tehnician Prosthodontist

Level of studies: Basic vocational studies – 1st level

Course:SUMMER PROFESSIONAL PRACTICE 3

Professor in charge (Name, middle initial letter, surname): Ivica Z. Stančić

Course status (compulsory/elective): Compulsory

ECTS: 2	**Year of the study:third**
Entry requirements:(passed exams from the previous years) /	**Course code: ZT17LSP3**

Objectives of the course: To get familiarized with basic principles of planning and independent work in different fixed restorations production, fixed part od complex dentures, removable ortodontic appliances and simulators and modern therapeutic appliances in solving partially edentuloussnes.

Outcome of the course

After summer practice student should :

- with independent work to overcome working with milling parallelometer and other devices and instruments in technology process complex dentures production;
- with independent work to overcome planning and built into technique different extracoronary and intracoronary attachments.
- with independent work to overcome planning and production technique for double crowns;
- to be acquainted with preparation and production of master casts for fixed restorations;
- to be acquainted and routinely modeling complete cast crown;
- to be acquainted and routinely modeling faced crown;
- to be acquainted with casting preparation and casting procedures for fixed appliances;
- to be acquainted with preparation and casting of master casts for ceramic and metal-ceramic fixed restorations;
- to be acquainted and routinely modeling metal-ceramic crowns and brigdges;
- to be acquainted with all-ceramic systems and working methods with them;
- to be acquainted with production technique of acrylic removable appliances;
- to be acquainted with production technique of functional appliances;
- to be acquainted with production technique of palatinal and lingual constructions for orthodontic appliances;
- to be acquainted with set up method;
- to be acquainted with thermoplastic foil production;
- to be acquainted with set-up for indirectly brackets positioning;

Content of the course

Practical sessions/method units and vocationl practice- single work		No of sessions
1	Study cast production and analysis in fixed prosthodontics. Individual tray production in fixed prosthodontics. Impression preparation for casting of master cast. Master cast production with mobile parts with pins. Preparation of dental casts with pins for fixed restorations production. Tranfer of upper and lower master cast in articulator. Wax-up and mock-up procedures.	30
2	Complete cast and faced crown modeling. Modeling of cap for metal-ceramic crown and for metal-ceramic crown with ceramic margine. Wax modeling of metal framework for front	30

	metal-ceramic bridge.	
3	Preparation of wax models for investment in refractory mass. Casting, processing and polishing.	30
4	Production of esthetic part od prosthetic restoration. Metal cap preparation for ceramic sintering. Layered application and ceramic sintering. Processing ceramic and correction sintering.ceramic glazing.	30
5	Milling in dentistry (modeling crowns and wax milling). Preparation for investment and investment into refractory mass. Preheating and annealing of refractory block, melting and casting. Cast processing and preparation for metal milling. Atachment positioning on wax model, investment and casting. Telescopic and conus double crown milling. Production of wax model of external crown.	20
6	Production of study cast for orthodontic appliances. Dental status, marking teeth, type and shape od teeht. Swarz analysis. Determination of middle of jaws and dental arch, dental arch comparation in sagital and trasversal axis. Determination of teeth position in vertical line. Estimation of shape and size of palatum. Model analysis: occlusion analysis in sagital, vertical and transversal direction. Removable ortodontic appliances: retention elements. Removable ortodontic appliances:labial arch, springs. Removable ortodontic appliances:screw, additional elements. Removable ortodontic appliances:plate, bite ridge. Functional ortodontic appliances: activator. Functional ortodontic appliances:bionator by Balters. Functional ortodontic appliances: function regulator by Frankel. Functional ortodontic appliances:Tnji block. M block. Functional ortodontic appliances:Herbst. Space guards. Termoplastic foils production and set-up. Indirectly positioning of brackets.	20
	TOTAL	160

Summer practice will take place along with teacher in charge and mentor – instructor, senior dental technican (summer practice report is filled out by mentor, and ESP number in index by teacher in charge) in laboratory of Clinic for Prosthetic Dentistry and Clinic for Orthodontics. Teacher in charge for summer practice keeps record about regular attedance and students' activities. After finished summer practice student doesn't get evaluation, but is under obligation to fill the pattern made for every student about their activities.