Course program

Basic Information

Title: Preclinical Restorative Dental Medicine

Code: 195682

Number of ECTS: 9

Number of hours: 120

Basic unit: Department of Endodontics and Restorative Dentistry

Leader: Assoc. Prof. Danijela Marović, PhD, DMD

Teachers and associates:

1. Prof. Zrinka Tarle, PhD, DMD
2. Prof. Nada Galić, PhD, DMD
3. Prof. Božidar Pavelić, PhD, DMD
4. Prof. Sanja Šegović, PhD, DMD
5. Prof. Vlatko Pandurić, PhD, DMD
6. Prof. Katica Prskalo, PhD, DMD
7. Prof. Paris Simeon, PhD, DMD
8. Assoc. Prof. Anja Baraba, PhD, DMD
9. Assoc. Prof. Ivona Bago, PhD, DMD
10. Assoc. Prof. Eva Klarić, PhD, DMD
11. Assoc. Prof. Danijela Marović, PhD, DMD
12. Assoc. Prof. Matijević Jurica, PhD, DMD
13. Assis. Prof. Višnja Negovetić Mandić, PhD, DMD

Description and aim of the course

Program of the course Preclinical restorative dental medicine is the introductory course into the multi layered issues of a large domain of the restorative dental medicine. The students will get fundamental knowledge encompassing diagnostics and therapy of teeth and the supporting tissues through lectures and preclinical practical.

In 30 hours of lectures, the students will be given fundamental and new theoretical findings in the field of restorative dental medicine about the workplace, instruments, anamnesis and tooth examination, nomenclature, dry working field, diagnostics and treatment planning, basic and contemporary principles of cavity preparation, materials for temporary and permanent fillings, recommendations for work with restorative dental materials, mistakes in the placement of fillings, biocompatibility of restorative materials, management of acute and chronical tooth trauma and vital tooth bleaching.

The aim of the preclinical practical is to train the students for their future work with patients. Therefore, students will examine the teeth of their fellow students, perform the cavity preparations on model teeth and phantoms, place the protective liners and/or adhesive system and a permanent filling, perform modeling and finishing of the filling with the occlusal adjustments and polishing. The students will also be able to work with contemporary materials and procedures, such as 3D printing in restorative dentistry.

Grading

Colloquium is taken in written form at the beginning of the VI semester and is consisted of 20 questions. Students who pass the colloquium with more than 90% correct answers are entitled to 2 additional points in the final exam.

The **exam** in Preclinical restorative dental medicine is taken after VI semester in the written form. Students answer the questions by selecting one or more of the offered answers. The exam is passed if 60% or more of questions are answered correctly. For 60%-70% of correct answers, the grade is sufficient (2), for 71-80% - good (3), from 81-90% - very good (4) and from 91-100% - excellent (5).

Student duties

Student should acquire the following knowledge:

1. Inspection of teeth, registration, nomenclature
2. Instruments in restorative dental medicine

3. Interdental matrices, function and placement methods
4. Basic principles of cavity preparation
5. Cavity classification according to Black
6. Cavity classification according to Mount
7. Pulp protection materials (zinc phosphate and polycarboxylate cements)
8. Glass ionomer cements (basic composition and properties)
9. Dental amalgam (basic composition and properties)
10. Adhesive systems (basic composition and properties)
11. Composite resins (basic composition and properties)

Student should acquire the following skills:

1. Inspection of teeth, registration
2. Isolation of working field
3. Placement of the rubber-dam
4. Placement of the appropriate matrix
5. Basic cavity preparation of class I, II, III, IV and V
6. Placement of the pulp protection material
7. Make an amalgam filling
8. Make an adhesive cavity preparation
9. Enamel etching
10. Dentine etching
11. Make composite filling of class I, II, III, IV, V and VI
12. Occlusal adjustment and polishing of the filling

Literature

Required literature:

1. Tarle Z, editor. Restorative Dental Medicine. Zagreb: Medicinska naklada; 2021.

Recommended literature:

1. Summit JB, Robbins JW, Hilton TJ, Schwartz RS. Fundamentals of operative dentistry: a contemporary approach: Quintessence Publishing Co, Inc 2006.
2. Mount GJ, Hume WR. Preservation and restoration of tooth structure. Mosby International Ltd. 1998.

3. Nakabayayashi N, Pashley DH. Hybridization of dental hard tissues. Quintessence Publishing Co., Ltd.1998.

4. Materials from the Merlin e-course

Exam terms

06.02.2024.

13.02.2024.

11.06.2024.

18.06.2024.

25.06.2024.

02.07.2024.

09.07.2024.

03.09.2024.

10.09.2024.

Curriculum

Lectures (Component 1):

No.	Subject	Date	Time and place	Lecturer (substitute)
1.	Introduction to restorative dental medicine	02.10.2023.	12.00-12.45 Gundulićeva 5 Computer room	TARLE (Marovic)
2.	Inspection of teeth, registration, nomenclature	09.10.2023.	12.00-12.45 Gundulićeva 5 Computer room	ŠEGOVIĆ (Simeon)
3.	Isolation of the working field	16.10.2023.	12.00-12.45 Gundulićeva 5 Computer room	MAROVIĆ (Šegović)
4.	Instruments in restorative dental medicine	23.10.2023.	12.00-12.45 Gundulićeva 5 Computer room	BARABA (Marović)
5.	Anamnesis and informed consent	30.10.2023.	12.00-12.45 Gundulićeva 5 Computer room	SIMEON (Marović)
6.	Diagnostics and treatment plan	06.11.2023.	12.00-12.45 Gundulićeva 5 Computer room	BARABA (Marović)
7.	Basic principles of cavity preparation	13.11.2023.	12.00-12.45 Gundulićeva 5 Computer room	MATIJEVIĆ (Marović)
8.	Contemporary principles of cavity preparation	20.11.2023.	12.00-12.45 Gundulićeva 5 Computer room	PANDURIĆ (Marović)
9.	Minimally invasive preparations	27.11.2023.	12.00-12.45 Gundulićeva 5 Computer room	MAROVIĆ (Negovetić Mandić)
10.	Protection of the pulp-dentine complex	04.12.2023.	12.00-12.45 Gundulićeva 5 Computer room	KLARIĆ (Marović)
11.	Materials for restoration of hard dental tissues	11.12.2023.	12.00-12.45 Gundulićeva 5 Computer room	KLARIĆ (Pandurić)
12.	Glass ionomer cements	18.12.2023.	12.00-12.45 Gundulićeva 5	PRSKALO

			Computer room	(Pavelić)
13.	Clinical application of glass ionomer cements	08.01.2024.	12.00-12.45 Gundulićeva 5 Computer room	BAGO (Prskalo)
14.	Dental amalgam	15.01.2024.	12.00-12.45 Gundulićeva 5 Computer room	GALIĆ (Šegović)
15.	Occlusal adjustment of fillings	22.01.2024.	12.00-12.45 Gundulićeva 5 Computer room	MAROVIĆ (Baraba)

Seminars: none

Practical (Component 1 – work on model teeth):

No.	Subject	Date	Lecturer
1.	Work place, instruments, dry working field (rubber-dam)	03.10.2023.	Marović / Negovetić Mandić
2.	Work models	10.10.2023.	Marović / Negovetić Mandić
3.	Diagnosis, caries-risk assessment and treatment plan	17.10.2023.	Marović / Negovetić Mandić
4.	Basic cavity preparation of class I and V	24.10.2023.	Marović / Negovetić Mandić
5.	Basic cavity preparation of class II	31.10.2023.	Marović / Negovetić Mandić
6.	Placement of cavity liners and different kinds of matrices, interdental wedges (MO, MOD, OD)	07.11.2023.	Marović / Negovetić Mandić
7.	Amalgam filling placement of class I, II and V	14.11.2023.	Marović / Negovetić Mandić
8.	Adhesive cavity preparation of class I and V	21.11.2023.	Marović / Negovetić Mandić
9.	Adhesive cavity preparation of class II	28.11.2023.	Marović / Negovetić Mandić
10.	Composite filling placement of class I, II and V, occlusal adjustment and polishing	05.12.2023.	Marović / Negovetić Mandić
11.	Adhesive cavity preparation of class III and IV	12.12.2023.	Marović / Negovetić Mandić
12.	Composite filling placement of class III and IV occlusal adjustment and polishing	19.12.2023.	Marović / Negovetić Mandić
13.	Cavity preparation for composite inlay, onlay or overlay	09.01.2024.	Marović / Negovetić Mandić
14.	Modelling of composite inlays and adhesive cementation	16.01.2024.	Marović / Negovetić Mandić
15.	Minimal invasive preparations	23.01.2024.	Marović / Negovetić Mandić

Lectures (Component 2):

No.	Subject	Date	Place and time	Lecturer
1.	Biological principles of adhesion	28.02. 2024.	Gundulićeva 3 9.15-10.00	BARABA (Simeon)
2.	Enamel-dentine adhesive systems	06.03. 2024.	Gundulićeva 3 9.15-10.00	TARLE (Pandurić)
3.	Direct pulp capping	13.03. 2024.	Gundulićeva 3 9.15-10.00	GALIĆ (Marović)
4.	Composite materials	20.03. 2024.	Gundulićeva 3 9.15-10.00	PAVELIĆ (Galić)
5.	Polymerization and polymerization stress	27.03. 2024.	Gundulićeva 3 9.15-10.00	PANDURIĆ (Marović)
6.	Polymerization light sources	03.04. 2024.	Gundulićeva 3 9.15-10.00	MAROVIĆ (Tarle)
7.	Direct restorations of anterior teeth	10.04. 2024.	Gundulićeva 3 9.15-10.00	TARLE (Marović)
8.	Direct restorations of posterior teeth	17.04. 2024.	Gundulićeva 3 9.15-10.00	MATIJEVIĆ (Marović)
9.	Indirect composite restorations	24.04. 2024.	Gundulićeva 3 9.15-10.00	BAGO (Prskalo)
10.	Treatment of non-carious lesions	08.05. 2024.	Gundulićeva 3 9.15-10.00	PRSKALO (Marović)
11.	Aesthetic intracanal posts	15.05. 2024.	Gundulićeva 3 9.15-10.00	BARABA (Šegović)
12.	Mistakes in the placement of direct restorations	22.05. 2024.	Gundulićeva 3 9.15-10.00	ŠEGOVIĆ (Marović)
13.	Treatment of acute and chronic tooth trauma	29.05. 2024.	Gundulićeva 3 9.15-10.00	SIMEON (Marović)
14.	Vital tooth whitening	29.05. 2024.	Gundulićeva 3 9.15-10.00	KLARIĆ (Pavelić)
15.	Biocompatibility of restorative materials	05.06. 2024.	Gundulićeva 3 9.15-10.00	NEGOVETIĆ MANDIĆ (Galić)

Practical (Component 2 – work on phantoms):

No.	Subject	Date	Lecturer
1.	Work place, instruments, dry working field (rubber-dam)	01.03. 2024.	Marović / Negovetić Mandić
2.	Cavity preparation of class I, placement of liner and amalgam, molar, occlusal adjustment	08.03. 2024.	Marović / Negovetić Mandić
3.	Cavity preparation of class II, placement of liner and amalgam, molar, occlusal adjustment	15.03. 2024.	Marović / Negovetić Mandić
4.	Cavity preparation of class I, placement of the adhesive and composite (incremental technique), molar, occlusal adjustment	22.03. 2024.	Marović / Negovetić Mandić
5.	Cavity preparation of class II, placement of the adhesive and composite (incremental technique), molar, occlusal adjustment	29.03. 2024.	Marović / Negovetić Mandić
6.	Cavity preparation of class II, glass-ionomer placement, occlusal adjustment	05.04. 2024.	Marović / Negovetić Mandić
7.	Cavity preparation of class II (sandwich technique), glass ionomer liner, placement of the adhesive and composite (incremental), occlusal adjustment	12.04. 2024.	Marović / Negovetić Mandić
8.	Cavity preparation of class III and V, placement of the adhesive and composite (incremental technique), occlusal adjustment	19.04. 2024.	Marović / Negovetić Mandić
9.	Cavity preparation of class IV, placement of the adhesive and composite (silicone key technique), occlusal adjustment	26.04. 2024.	Marović / Negovetić Mandić
10.	Cavity preparation of class II, placement of the adhesive and composite (bulk fill technique), occlusal adjustment	03.05. 2024.	Marović / Negovetić Mandić
11.	Minimally invasive preparation of the cavity, open and closed tunnel preparation, minibox preparation, preventive filling	10.05. 2024.	Marović / Negovetić Mandić
12.	Reparation of composite fillings „in situ“ and polishing of the fillings	17.05. 2024.	Marović / Negovetić Mandić
13.	Cavity preparation for composite inlay, onlay, overlay, impressions, production of casts	24.05. 2024.	Marović / Negovetić Mandić

14.	Modeling of indirect composite inlays	31.05. 2024.	Marović / Negovetić Mandić
15.	Adhesive cementation of indirect composite inlays	07.06. 2024.	Marović / Negovetić Mandić