Academic year 2021./2022.

Course title Importance of dental color assessment in various dental treatments

Department Department of removable dentures

Adress School of Dental medicine, University of Zagreb, Gundulićeva 5, 10000 Zagreb, Croatia

Total ECTS points 4

Course leader prof. Dubravka Knezović Zlatarić, DDM, MSc, PhD

Course associates

Teaching plan

	No. classes
Lecture	3
Seminar	7
Practical	10
Total	20

1 class = 45 minutes

Course description

Smile design presents one of the main goals in esthetic dentistry. Previous studies have emphasized dental color as one of the most important parameters in successfull dental treatment. Anyhow, dentists are still not introduced enough in basic characteristics of dental color and different techiques of it's in vivo assessment.

The aim of this subject is to educate dentists in basic dental color components and dental color assessment techniques.

In teoretical part the basic dental color characteristics and different ways of it's expression are discussed. Value (lightness), color saturation (chroma) and color (hue) of the natural tooth as basic parameters to be considered in color assessment are emphasized. Three different color assessment techniques – clasicall and linear shade-guide as well as digital shade-matching device are described.

in practical part the candidates train dental color assessment using Toothguide Training Box dependent on value, chroma and hue. Afterwards, they rearrange clasical dental shade-guide according to value and assess dental color in vivo. Using linear dental shade-guide and digital shade-matching device they assess the same teeth. Different modes of color assessment and verification are trained using digital shade-matching device as well.

Learning outcomes

1. describe and explain the basic parameters of natural tooth color
2. present different methods of visual and digital assessment of natural tooth color
3. visually evaluate and digitally measure the color of the natural tooth, distinguish and analyze the results of the obtained data

4. compare the obtained data and decide to apply one of the techniques in clinical work depending on the degree of discoloration of natural teeth

Course contet

Lecture

	Lecture topics	**Number of classes/hours**
1.	Basics of esthetic dentistry – importance of dental color changes in patient's level of satisfaction with his/her dental appearance	1
2.	Natural dental color and its components	1
3.	Various methods of dental color assessment	1

1 sat = 45 minuta

Seminari

	Seminar topics	**Number of classes/hours**
1.	Analysis of recent scientific achievements about patient's satisfaction with current and new dental color	1
2.	Analysis of previous participant's experience about problems with current and new patient's dental color	1
3.	Comparison of various visual dental color assessments	1
4.	Comparison of various digital dental color assessments	1
5.	Matching of tooth colors evaluated using different visual and digital dental color assessments	1
6.	Modification of current dental color in different dental treatments	1
7.	Modification of dental color using bleaching procedures, composite and ceramic materials	1

1 sat = 45 minuta

Vježbe

	practicals topics	**Number of classes/hours**
1.	Initial analysis, handling and rearrangement of classical dental shade-guide tabs according to the dental teeth values	1
2.	Initial analysis and handling with linear dental shade-guide tabs according to the dental teeth value, chroma and hue	1
3.	In vitro model of dental color assessment training procedure according to the value, chroma and hue using Toothguide Training Box device (TTB)	1
4.	In vivo usage of linear dental shade-guide tabs	1
5.	Initial analysis, calibration and handling with dental shade-matching devices	1

6.	In vivo digital assessment of tooth color (basic, average, three tooth areas)	1
7.	In vivo visual assessment of bleaching procedure	1
8.	In vivo digital assessment of bleaching procedure	1
9.	In vivo evaluation of ceramic restoration color matching with the inital dental color assessment	1
10.	Final analysis of the results obtained dependent on different shade system expressions	1

1 class = 45 minutes

Literature

Mandatory:

Knezović Zlatarić D i sur. Osnove estetike u dentalnoj medicini. Zagreb; HKDM, 2013.
Gürel G. Znanje i vještina u izradi estetskih keramičkih ljuski. Zagreb; Quintessence Publishing, 2009.
Estetska stomatologija, Godišnjak 2009. Zagreb; Quintessence Publishing, 2010.
Greenwall L. Tehnike izbjeljivanja u restorativnoj stomatologiji. Zagreb; Aria, 2011.

Recommended:

Knezović Zlatarić D (urednik izdanja). Estetska stomatologija: Sklad - Vještina - Tehnologija. Zagreb; Quintessence Publishing, 2018.
Duarte Jr S (urednik). QDT 2020 - Quintessence of Dental Technology 2020. Zagreb; Quintessence Publishing, 2020.

CV (*curriculum vitae*) and bibliography of course leader

Dubravka Knezović Zlatarić is a full professor at the Department of Removable Prosthodontics and head of elective courses "Fundamentals of Aesthetics in Dental Medicine" and "Clinical Digital Communication with Dental Laboratory" at the School of Dental Medicine, University of Zagreb, Croatia, where she specialized in dental prosthodontics and defended her dissertation.

As a member of the European Prosthetic Association, she has been awarded three times - for the best presented scientific research, poster presentation and as a young researcher in the field of prosthetics.

In 2007, she won second place for a poster presentation at the ICP international Prosthodontic Congress in Fukuoka, Japan. At the same time, she is the leader and principal investigator of several scientific projects funded by the Ministry of Science and the University of Zagreb, Croatia.

She has given a number of lectures at international scientific and professional conferences, including lectures at the SCAD conference in Los Angeles, CA, USA and at the Quintessence Congress in Zagreb 2019.

Her scientific and clinical field of work is various aesthetic dental procedures with an emphasis on minimally invasive ones and the fabrication of restorations that achieve a completely natural appearance of the patient from which she published a number of scientific and professional articles in international peer-reviewed scientific journals.

Bibliography:

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