

CHART OF DISCIPLINE/ SYLLABUS

1. Study Program Data

1.1 High Education Institution	“VICTOR BABEȘ” UNIVERSITY OF MEDICINE AND PHARMACY OF TIMIȘOARA
1.2 Faculty	DENTAL MEDICINE
1.3 Department	II MD
1.4 Study Domain ¹⁾	DENTAL MEDICINE
1.5 Cycle Studies ²⁾	Bachelor Degree Studies
1.6 Study programme/ Qualification	DENTAL MEDICINE

2. Course Data

2.1.Course/Department	Conventional and digital color monitoring and analysis methods in MD							
2.2 Course tutor	Conf. Univ. Dr. Buzatu Roxana							
2.3 Practical activity tutors	Conf. Univ. Dr. Buzatu Roxana							
2.4. Year of study	2nd	2.5 Semester	5th	2.6 Assessment	C	2.7 Course rank	Content ³⁾ Mandatory /Compulsory ³⁾	DS DO

3. Duration/Estimated Time (number of hours/ semester of teaching activity)

3.1 Number of hours/ week	2	3.2 lecture/course	1	3.3 laboratory	1
3.4 Total hours of curriculum	28	3.5 lecture/course	14	3.6 laboratory	14
Time distribution for course activities					
Study support- manuals, lectures, references and notes					-
Additional documentation – library, dedicated platforms from domain					-
Documentation for seminars/ practical activity/ projects, themes, portfolios and essays					-
Tutoring					-
Assessment					1
Other activities					-
3.7 Total number of hours for individual study	-				
3.8 Total number of hours per semester	28				
3.9 Number of credits ⁵⁾	1				

4. Preconditions (if applicable and requested)

4.1 Courses- studied curriculum / rules for attending the course	Non applicable	
4.2 Practical activities/seminars/projects studied curriculum, basic skills/ rules for attending the course	Non applicable	

5. Condition (if applicable and requested)

5.1 Courses	- videoprojector, blinds, air conditioning in the classroom Rules: punctuality, ensuring peace and active participation of students during the course
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5.2 Laboratory/practical activity/ project	Rules: punctuality and active participation of students Equipment and materials needed: <ul style="list-style-type: none"> - color keys - digital color determination devices - video projector
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6. Key competencies and basic skills

Professional Competencies	1. Development of color analysis skills 2. Knowledge of the methods of determining the color of the teeth 3. Knowledge of the principles and methods of color reproduction in the dental office 4. Knowledge of cutting-edge techniques and technologies in the field of color identification and reproduction in the dental office 5. Correct indication and knowledge of material layering techniques in different clinical cases 6. Learning the ways to influence the aesthetic perception, so that the restorations they carry out integrate harmoniously at the dento-facial level and imitate the natural one as best as possible.
Transversal Competence	1. Development of interdisciplinary collaboration skills 2. Efficient use of information sources and assisted professional training resources (Internet portals, specialized software applications, databases, online courses, etc.).

7. Disciplines/Course objectives (based on the key competences)

7.1 Disciplines/Course general objectives	Development of skills and abilities regarding conventional and digital color analysis and monitoring in MD
7.2 Disciplines/Course specific objectives	<ul style="list-style-type: none"> - to know the methods of determining the color of the teeth (classical and digital) - to develop their chromatic analysis skills - to know the principles and methods of color reproduction in MD - to acquire the ways of influencing the aesthetic perception, so as to obtain restorations that imitate the natural as best as possible

8. Content

8.1 Course	Teaching method	Number of hours	Notification
1. Introduction to color -historic -definition -the light; the dynamics of the light	Oral lecture delivered with the help of structured, interactive Powerpoint presentations, according to the theme, accompanied by rich and suggestive iconography Each course presents the educational objectives at the beginning and ends with the summary of the concepts presented.	1	
2. Color perception of the eye -retinal response the cortical response the color contrast color constancy -deficiencies of perception		1	
3. Color ordering systems. Color classes -the Munsell system (1905) - the CIE system		1	
4. Reproduction of color		1	
5. Optical and chromatic characteristics of dental hard structures.		1	
6. Chromatic characteristics of materials for aesthetic restorations -ceramics - composite resins -glass ionomers - pedodontic heads -temporary restorations			
7. Methods of determining the color of teeth. The classic method. - color keys (Vitapan Classic, Vitapan			

3D Master, Ivoclar Vivadent) - color registration conditions			
8. Methods of determining the color of teeth. Digital methods and devices -Shade Eye NCC Chroma Meter (colorimeter) -Vita Easyshade (spectrophotometer) -ShadeScan, ShadeVision system (digital) -SpectroShade, ClearMatch system (hybrid)			
9. Fineness chromatic analysis. Color map			
10. Material layering techniques in different clinical cases - choosing the material - the components of stratification -classic technique in 2 layers -classic technique in 3 layers - modern technique in 2 layers - modern technique in 3 layers			
11. Elements that influence color perception. Influence of cementitious adhesives on the color of final dental restorations - the light source -contrast effects (hue, saturation, surface, malposition) - the observer -types of cement adhesives - cementitious adhesive principles - the influence of cementitious adhesives			
12. Teeth whitening -historic -used materials - treatment planning - intracoronary and extracoronary bleaching -dental sensitivity -toxicological and safety considerations regarding tooth whitening - clinical cases			
13. Correction of color defects of indirect restorations - Extrinsic correction			
14. Dental office-dental laboratory communication; methods of effective transmission of information			

Mandatory references: ⁶⁾

1. PDFcourse, Conf.Univ.Dr.Roxana Buzatu
2. Esthetic color training in dentistry; Rade D. Paravina, John M. Powers
3. Anca Vâlceanu, Constantin Vârlan, Eleonora Schiller. – Fiziologia și Patologia Cromaticii Dentare – Ed. Orizonturi Universitare Timisoara, 2006

Optional references

4. Florin Lazarescu – Incursiune in Estetica Dentara, SSER Bucuresti 2013
5. Pascal Magne – Biomimetic Restorative Dentistry, Quintessence Pub Co, 2nd Edition (2022)
6. Jordi Manauta, Anna Salat – Layers 2. Direct Composites: The Styleitaliano Clinical Secrets, Quintessence Pub, 2022
7. Linda Greenwall– Tooth Whitening Techniques, CRC Press, 2017
8. Michael Cohen – Interdisciplinary Treatment Planing, Principles, Design, Implementation, Quintessence Publ. Co, Inc, 2011
9. Douglas A. Terry – Aesthetic & Restorative Dentistry; Material Selection & Technique, Quintessence Pub 2013
10. Mauro Fradeani, Giancarlo Barducci – Esthetic Rehabilitation in Fixed Prosthodontics: Prosthetic Treatment - a sistematic approach to esthetic, biologic and functional integration, Vol.2, Ed. Quintessence Pub Co, 2008

8.2 Seminars/ Laboratory/practical activity/ projects	Teaching-learning, methods	Number of hours	Notification
1. Introduction to color determination	Lecture	1	
2. Elements that influence color perception. Creating the optimal conditions for color determination	Conversation		
	Debate		
3. The classic method of determining the color of the teeth	Exemplifying		
	Demonstration		
4. The digital method of determining the color of the teeth	Practical application		
5. Fineness chromatic analysis. Color map			
6. Chromatic analysis sheet nr.1			
7. Chromatic analysis sheet nr.2			
8. Chromatic analysis sheet nr.3			
9. Chromatic analysis sheet nr.4			
10. Reproduction of color in MD-principles			
11. Reproduction the color of the teeth with the help of composite resins I			
12. Reproduction the color of the teeth with the help of composite resins II			
13. Teeth whitening -integration with dental restorations -clinical cases			
14. Documentation of the case through photography			
Mandatory references: 1. PDFcourse, Conf.Univ.Dr.Roxana Buzatu 2. Esthetic color training in dentistry; Rade D. Paravina, John M. Powers 3. Anca Vâlceanu, Constantin Vârlan, Eleonora Schiller. – Fiziologia și Patologia Cromaticii Dentare – Ed. Orizonturi Universitare Timisoara, 2006			
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9. Correlations between the content of the course and the requirements of the professional field and relevant employers

Modern society offers patients in dental offices multiple models of facial and dental beauty. Depending on the biological terrain of each patient, they are easier or harder to achieve. Dental restorations can be refused by patients if they do not meet aesthetic requirements, of which color is an essential element. The correct reproduction of the tooth color is based on a correct chromatic analysis, so that the restoration obtained in the dental office imitates the natural one as well as possible.

10. Assessment

Activity	10.1 Assessment criteries	10.2 Assessment methods	10.3 Percentage of the final grade
10.4 Course	<i>Knowledge for grade</i> <i>Knowledge for grade</i> in.	<i>Final evaluation:</i>	

10.5 Practical activity/ seminar	<i>Knowledge for mark 5:</i> <i>Knowledge for mark 10:</i>	<i>Final evaluation:</i>	
10.6 Minimum performance standard-basic knowledge			

Date 14.11.2022	Signature of the course holder	Signature of the laboratory/seminar holder
Signature of the Head of Discipline		
Date of approval in the Department	Signature of the Head of Department	

- 1) Domeniul de studii - *se alege una din variantele:* Licență/ Masterat/ Doctorat (**se completează conform cu Nomenclatorul domeniilor și al specializărilor/ programelor de studii universitare în vigoare**) ;
- 2) Ciclul de studii - *se alege una din variantele:* Licență/ Master/ Doctorat;
- 3) Regimul disciplinei (conținut) - *se alege una din variantele:* **DF** (disciplină fundamentală)/ **DD** (disciplină din domeniu)/ **DS** (disciplină de specialitate)/ **DC** (disciplină complementară) - *pentru nivelul de licență;* **DAP** (disciplină de aprofundare)/ **DSI** (disciplină de sinteză)/ **DCA** (disciplină de cunoaștere avansată) - *pentru nivelul de masterat;*
- 4) Regimul disciplinei (obligativitate) - *se alege una din variantele:* **DI** (disciplină obligatorie)/ **DO** (disciplină opțională)/ **DFac** (disciplină facultativă);
- 5) Un credit este echivalent cu 25 de ore de studiu (activități didactice și studiu individual).

*nr de ore de studiu individual (punctul 3.7.) = nr total ore (nr credite X 25) minus nr. ore din planul de învățământ (punctul 3.4) minus ore alocate pentru examinări. Aceste ore se împart între

Studiul după manual, suport de curs, bibliografie și notițe	
Documentare suplimentară în bibliotecă, pe platformele electronice de specialitate și pe teren	
Pregătire seminarii/ laboratoare/ proiecte, teme, referate, portofolii și eseuri	
Tutoriat	

- 6) Pentru specializările și/sau disciplinele a căror tematică se regăsește în bibliografia de rezidențiat, aceasta devine obligatorie. Dintre titlurile bibliografice, 50% trebuie să fie din ultimii 5 ani.