



WROCLAW

MEDICAL UNIVERSITY

Department of Experimental Dentistry
Head: Prof. Mieszko Więckiewicz DMD, PhD, DSc

Wrocław, 14.02.2022

PROSTHETIC MATERIALS

Practical classes, II year
Summer semester, academic year 2021/2022

Time: Tuesday, 08.00 - 11.00 group A

Friday 08.00 - 11.00 group B

Place: Phantom class (no. 125, 1st floor), Wrocław, ul. Krakowska 26

Teacher: Prof. Mieszko Więckiewicz DMD, PhD, DSc; lek. dent. Andrzej Małysa

No.	Date	Topic
1.	01.03.2022 04.03.2022	1. Regulation and organization of classes. 2. General introduction to dental laboratory equipment and organization of dental laboratory.
2.	08.03.2022 11.03.2022	1. Gypsum products and other die materials. 2. Isolating materials. 3. Mixing of model plaster and performance of gypsum cube (dim. 3x3x3cm). Knives and mechanical trimming. 4. Mixing of high – strength dental stone and performance of die stone cube (dim. 1,5x1,5x1,5cm). Knives and mechanical trimming.
3.	15.03.2022 18.03.2022	1. Flexible Dental Impression Materials – irreversible. 2. Flexible Dental Impression Materials – reversible. 3. Measurement of the total setting time for alginate impression material. 4. Taking the impression of edentulous maxillary or mandibular arch phantoms. 5. Pouring the gypsum model and mechanical trimming.
4.	22.03.2022 25.03.2022	1. Rigid Dental Impression Materials - reversible and irreversible. 2. Impression trays. 3. Preparation of impression trays to taking an impressions (adhesive layer). 4. Low viscosity-high viscosity impression with silicones materials. 5. Measurement of total setting time for silicones impression materials: addition type and condensation type. 6. Measurement of the total setting time for polyether impression materials.
5.	29.03.2022 01.04.2022	1. Dental waxes – type of waxes, properties and applications. 2. Isolating materials for acrylic denture base resins. 3. Performance of models wax cube (dim. 1x1x1cm) for Acrylic base resins polymerization.
6.	05.04.2022 08.04.2022	1. Acrylic denture base resin – heat-curing: properties and applications. 2. Initial polymerization of acrylic resins. 3. Placing acrylic resin in the mold of flask. 4. Compressing and placing flask in the polymerization frame.

		5. Short – time polymerization.
7.	12.04.2022 22.04.2022	1. Acrylic denture base resins—self-curing: properties and applications. Part. I 2. Performance of self-curing acrylic resin baseplate on the edentulous maxillary or mandibular models.
8.	26.04.2022 29.04.2022	1. Acrylic denture base resins- self-curing. Part II. 2. Repair of broken acrylic baseplate.
9.	06.05.2022 10.05.2022	1. Finishing and polishing of acrylic denture base resins. 2. Finishing and polishing of all acrylic student’s manual works.
10.	13.05.2022 17.05.2022	1. Dental alloys, thermoplastic and composite materials used in dentistry. 2. Demonstration of making occlusal splint base from Erkodur. 3. Demonstration of making the second part of the occlusal splint with light-cured material.
11.	20.05.2022 24.05.2022	Make up week.
12.	27.05.2022 31.05.2022	Final test of Dental Materials.

Forms of completing the course: credit

Basic literature:

1. Powers J.M., Sakaguchi R.L.: Craig's Restorative Dental Materials, 12th Edition, Mosby Elsevier, 2006.
2. John M. Powers., John C. Wataha: Dental Materials, Properties and Manipulation, 10th edition, Mosby 2012.

Additional literature:

1. Marcia Gladwin, Michael Bagby: Clinical Aspects of Dental Materials Theory, Practice and Cases ISBN – 2nd ed., Philadelphia: Lippincott Williams & Wilkins, 2009.
2. Kenneth J Anusavice, Phillips' Science of Dental Materials, 11th Ed. Saunders 2003.

Conditions to receive credit for the course:

Pass of the manual training and final test (multiple choice test, 20 questions, 60% to pass) – at the end of semester.

The course is a part of *the Exam of Preclinical Dentistry*.

Prepared

Checked

Accepted



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PROSTHETIC MATERIALS

Lectures & seminars, II year
Summer semester, academic year 2021/2022

Monday 13.15 - 14.45

Lectures:

28.02.22 and 07.03.22 13:15-14:45

14.03.22 13:15-14:00

Seminars:

21.03.22 - 11.04.22 13:15-14:45

25.04.22 13:15-14:00

Place:

Lectures: online

Seminars: class no. 423 (Department of Orthodontics), 4th floor, Wrocław,
ul. Krakowska 26

Teacher: lek. dent. Andrzej Małysa

No.	Date	Topic
1.	28.02.2022	<u>Lecture I:</u> 1. General classification of dental materials 2. Physico-mechanical properties of dental materials 3. Biocompatibility of dental materials <u>Lecture II:</u> 1. Impression materials
2.	07.03.2022	<u>Lecture III:</u> Acrylic denture base resins <u>Lecture IV:</u> Dental Ceramics
3.	14.03.2022	<u>Lecture V:</u> 1. Dental Alloys 2. Dental investments 3. Joining techniques of ceramic covering the alloy surfaces
4.	21.03.2022	Seminar I: Thermoplastic materials
5.	28.03.2022	Seminar II: Materials for digital dentistry
6.	04.04.2022	Seminar III: Composites
7.	11.04.2022	Seminar IV: Polymers
8.	25.04.2022	Seminar V: Materials for Adhesion and Luting

Prepared

Checked

Confirmed