

**Semmelweis University, Faculty of Dentistry - single, long-cycle medical training -
Osztatlan általános fogorvos képzés**

Name of the host institution (and any contributing institution):

Helyreállító Fogászati és Endodonciai Klinika

Name of subject: The Basics of Biomimetic Dentistry

in English: The Basics of Biomimetic Dentistry

in German: Grundlagen der biomimetischen Zahnheilkunde

Credit value: 1

Semester: 9th semester

(in which the subject is taught according to the curriculum)

Hours per week	Lecture	Practical lesson	Seminar
0.0	0.0	0.0	0.0

Hours per semester	Lecture	Practical lesson	Seminar
0.0	0.0	0.0	0.0

Type of course:

elective

Academic year:

2026/27

Language of instruction (for optional and elective subjects):

Angol

Course code:

FOSVKFK373_1A

(in the case of a new course, to be completed by the Dean's Office, following approval)

Course coordinator name: Dr. Vág János

Course coordinator location of work, telephone availability: Helyreállító Fogászati és Endodonciai Klinika, 061459-1500/59377

Course coordinator position: klinika igazgató

Course coordinator Date and number of habilitation: 2019.06.06 09/2019

Objective of instruction and its place in the curriculum:

Introduction to the clinical and material science criteria and methods of biomimetic dentistry.

Method of instruction (lecture, group work, practical lesson, etc.):

Competencies acquired through completion of course:

Upon successful completion of the course, the student will acquire foundational knowledge of modern cariology, methods to achieve optimal adhesion, the requirements for biomimetic material selection, and biomechanically based clinical decision-making. This will enable the student to independently continue expanding their biomimetic-oriented knowledge after graduation

Course outcome (names and codes of related subjects):

Prerequisites for course registration and completion: (CODE):

In the case of multi-semester courses, position on the possibility of and conditions for concurrent registration:

The number of students required to start the course (minimum, maximum), student selection method:

Detailed course syllabus (if the course can be divided into modules, please indicate): (Theoretical and practical instruction must be broken down into hours (weeks), numbered separately; names of instructors and lecturers must be listed, indicating guest lecturers/instructors. It cannot be attached separately! For guest lecturers, attachment of CV is required in all cases!)

I. Fundamentals of Biomimetic Dentistry

- Histological and anatomical knowledge
- Biomechanical principles
- Caries diagnostics
- Selective caries removal
- Hierarchy of adhesion
- High-level adhesion to all dental tissues
- Immediate Dentine Sealing (IDS)
- Material science and polymerization dynamics of composites
- Stress-reduction techniques
- Fiber reinforcement

- Material science of dentin restoration
- Deep Margin Elevation (DME)
- Clinical method for dentin restoration – the biobase
- Enamel restoration using direct technique – SRDC
- Enamel restoration using indirect technique – material selection
- Enamel restoration using indirect technique – impression / scan
- Enamel restoration using indirect technique – cementation

Occlusion

Other courses with overlapping topics (obligatory, optional, or elective courses) in interdisciplinary areas. To minimize overlaps, topics should be coordinated. Code(s) of courses (to be provided):

Requirements for attendance, options for making up missed sessions, and method of absence justification:

Obtaining the course signature requires attendance at a minimum of 75% of the seminars; under no circumstances may absences exceed 25%.

Assessment methods during semester (number, topics, and dates of midterms and reports, method of inclusion in the course grade, opportunities for make-up and improvement of marks):

(number, topics, and dates of midterms and reports, method of inclusion in the course grade, opportunities for make-up and improvement of marks)

signature

Number and type of individual assignments to be completed, submission deadlines:

there is none

Requirements for the successful completion of the course:

Minimum 15 – maximum 40 students, voluntary participation, enrolled in order of application.

Type of assessment:

completion-based course

Exam requirements (list of topics, topics of the test exam, and the optional project topics accepted as an exam)

there is none

Clear, specific minimum requirements for assessment. (The list of mandatory concepts, parameters, diagrams, calculations, and practical skills required to obtain a passing grade, as well as the criteria for the completion and evaluation of project assignments accepted as an exam.) A link published on the department's website referring to the minimum requirements of the course.

there is none

Method and type of grading (Share of theoretical and practical examinations in the overall evaluation. Inclusion of the results in the end-of-term assessment. Possibilities of and conditions for offered grades.): (Share of theoretical and practical examinations in the overall evaluation, Inclusion of the results in the end-of-term assessment, Possibilities of and conditions for offered grades)

signature

Artificial intelligence systems used in the teaching of the subject and the manner of their application

Signature of habilitated instructor (course coordinator) announcing the course:

Signature of the director of the host institution:

Date of submission:
