22nd Bulletin
No. 26

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CURRICULA

26th Curriculum for the University Course in "Periodontology and Implantology"
26th Curriculum for the University Course in "Periodontology and Implantology"

Pursuant to § 25 Para. 1 Z 10 in conjunction with § 56 UG the Senate of the Medical University of Vienna, in its meeting on March 16, 2018, approved the resolution of the Curriculum Board for University Courses dated November 22, 2017, concerning the curriculum for the university course in "Esthetic Dentistry". The period of validity of the Curriculum is limited to three years. The Curriculum is as follows:

Part I: General

§ 1 Objective

The university course in "Periodontology and Implantology" represents postgraduate basic training and further training for practicing dentists. The course imparts state-of-the-art knowledge based on the study of dentistry and specialization in the field of periodontology and implantology. In addition to the acquisition of scientific principles, an update of theoretical training and especially practical training under the supervision of experts from the field of periodontology and implantology represent the basis of this university course.

For the master study a research platform from the field of periodontology and implantology is available.

§ 2 Qualification Profile

The university course in "Periodontology and Implantology" imparts consolidated, scientifically and methodologically excellent education oriented toward sustained knowledge that renders graduates capable of further qualification and an occupation in the following fields of activity, for example, and makes them internationally competitive:

- Principles: Update of orofacial anatomy, histology, and molecular biology
- Conservative treatment of periodontitis
- Periodontal surgery I: Resective and regenerative procedures
- Periodontal surgery II: Soft tissue management
- Implantology I: Principles, anatomy, and histology, concepts, Guided Bone Regeneration, Socket Preservation
- Implantology II: Immediate implantations, computer-guided implantations, sinus floor elevations, bone augmentations
- Implantology III: Complex bone augmentations and bone reconstructions, preprosthetic surgery and zygoma implants
- Implant prosthetics: Occlusion theory and digital dentistry
- Graduates are qualified for university teaching in the field of periodontology and implantology
§ 3 Cooperative Agreements

For the purpose of commercial and organizational support the course will be held in collaboration with the University Clinic of Dentistry Vienna (a wholly owned subsidiary of the Medical University of Vienna). More detailed provisions are regulated in a cooperative agreement.

§ 4 Duration and Structure

(1) The university course lasts 4 semesters with a total of 34 semester hours of mandatory courses (504 academic hours), which is equivalent to 70 ECTS credits. Taking the master paper into account (20 ECTS credits) the course accounts for 90 ECTS credit points.

(2) Some of the theoretical material is available as a correspondence degree course (e.g., e-learning).

(3) The course is held on an in-service basis, alongside professional work. Courses can also be held during the course-free period.

(4) Courses are only held in English.

§ 5 Requirements for Enrollment

(1) The prerequisite for enrollment on the university course is the presentation of evidence of:
   a) A completed course of university study or an equivalent course of study successfully completed at a recognized Austrian or foreign post-secondary education institution, each accounting for at least 300 ECTS credit points in the discipline of Dentistry;
   b) Registration to practice the profession of dentist at the location of patient treatment because the course participants must treat patients outside the University Clinic of Dentistry Vienna in the facilities of their own dental occupation in accordance with the criteria learned in the curriculum in order to be able to handle the patient cases required for successful completion of the university course;
   c) Knowledge of English is required (equivalent to Level B2/C1 of GER/CEFR or language examination and decision to be taken by the course director) that will permit the reading of scientific literature and the understanding of subject-specific lectures; also computer knowledge that allows trouble-free use of a teaching and learning platform as well as the use of literature databases;
   d) At least 2 years of professional experience.

(2) The application for enrollment must be accompanied by a letter of application and a curriculum vitae.

(3) Proof of fulfillment of the listed prerequisites will be required from all applicants. The academic course director verifies the suitability of applicants based on the documents presented, especially the letter of application and, if need be, a personal interview.
(4) Enrollment is only possible before the start of the course. The academic course director specifies the maximum number of course participants per course taking into account the number of university places available. Exceptional cases concerning enrollment after the start of the course can only be approved by the curriculum director after proposal by the academic course director, inasmuch as evidence of the completion of equivalent syllabuses can be produced.

(5) According to § 70 (1) in conjunction with § 51 (2) Z 22 UG the participants have to apply for course enrollment as extraordinary students. The enrollment of course participants is decided by the principal after proposal by the academic course director.

Part II: Study and Examination Regulations

§ 6 Course Syllabus

The university course in "Periodontology and Implantology" is comprised of the following:

Mandatory courses (LV)

<table>
<thead>
<tr>
<th>MODULE 1 Principles: Update of orofacial anatomy, histology, and molecular biology</th>
<th>LV type</th>
<th>Academ. hours (aS)</th>
<th>Self-study (aS)</th>
<th>ECTS</th>
<th>Examination procedure</th>
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<tbody>
<tr>
<td></td>
<td>VB</td>
<td>63</td>
<td>152</td>
<td>8</td>
<td>Written and oral performance verification, cooperation</td>
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</table>

- Update of orofacial macro- and micro-anatomy and of the periodontium in theory and practice - human anatomy cadaver course (18 aS)
- State-of-the-art oral biology at cellular and molecular levels (9 aS)
- Update of the pathology and pathophysiology of oral disease of hard and soft tissue (12 aS)
- Dentally relevant pharmacology (2 aS)
- State-of-the-art dental radiology, CT and MRI examination and diagnosis (4 aS)
- Emergency medicine / forensics (4 aS)
- Oral, dental and facial photographic documentation (5 aS)
- LINE_Scientific work: Introduction (9 aS)

The module imparts state-of-the-art knowledge of anatomy and histology of the orofacial region and the periodontium as well as state-of-the-art knowledge of research into cellular and molecular mechanisms of the pathophysiology of the bone and soft tissue and of the pathogenesis of periodontitis and periimplantitis. This theoretical knowledge is consolidated practically within the scope of a human anatomy cadaver course. This module is also concerned with state-of-the-art oral radiological diagnosis, clinical use of medications for oral diseases, emergency medicine, and

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1 VO = lectures | UE = exercises | PR = practicals | SE = seminars | WA = scientific work
2 Combined courses: VB = lecture with practical exercises | VS = lecture and seminar | VU = lecture and exercise | SK = seminar with practical | SU = seminar with exercise | PX = practice seminar | PU = practical exercise
3 Semester (week) hours (1 SWS = 15 aS): The number of lectures / total number of mandatory courses is indicated in contact hours (presence times). Depending on the duration of a semester (15 weeks) a contact hour means 15 units of academic tuition hours (aS) each lasting 45 minutes.
4 Times for self-study are indicated in real-time hours.
The module imparts state-of-the-art knowledge of multifactorial etiology as well as interdisciplinary treatment concepts and new treatment technologies in the conservative treatment of periodontitis and periimplantitis. This knowledge is consolidated by means of intensive practicals. The module is also concerned with state-of-the-art diagnosis of microbiology and relevant biomarkers in oral fluid.

Theoretically and in intensive practicals the module deals with regenerative and resective periodontal surgery, state-of-the-art surgical procedures, and various conventional flap surgery and the use of laser in periodontal surgery. This module is also concerned with the surgical treatment of bone defects peri-implant bone defects triggered by periimplantitis. In addition, this module imparts knowledge of the development and use of bone augmentation materials and growth factors as well as the preoperative and postoperative management of complex cases.
The module deals with general soft tissue management and the etiology of gingival hyperplasia, recessions, and defects in order to take the appropriate clinical measures for prevention and treatment. By means of intensive practicals, state-of-the-art surgical procedures of soft tissue management are taught and skills in the interdisciplinary treatment of soft tissue modulation are subsequently intensified.

**MODULE 5 Implantology I: Principles, anatomy, and histology, concept, Guided Bone Regeneration, Socket Preservation**

- Implantology I: Principles, anatomy, and histology, concept, Guided Bone Regeneration, Socket Preservation, and fixation in edentulous alveolar ridges (8 aS)
- Implant systems, implant surfaces, and principles of osseointegration, as well as implantation practical on a phantom (8 aS)
- Guided Bone Regeneration and alveolar ridge preservation after tooth extraction (Socket Preservation) (8 aS)
- Dissection course at the Institute of Anatomy (8 aS)
- Live surgery – fixation of interferominal intraosseous implants in the mandible and Guided Bone Regeneration (4 aS)
- Dental traumatology and implant complications (4 aS)
- Hard and soft tissue augmentations – principles and clinical results as well as esthetic aspects in oral implantology (8 aS)
- LINE_Scientific work (6 aS)
- LINE_Case discussion, case presentation (9 aS)

The module deals with the special implant-relevant anatomy and histology of edentulous alveolar processes. Knowledge is imparted in the principles of implantology as well as special implant-relevant procedures such as guided bone regeneration and procedures to preserve the alveolar process after edentition and it is practiced within the scope of a human anatomy cadaver course. In live surgery interantral and interferominal implantations are demonstrated on edentulous patients. Hard and soft tissue augmentation procedures – also with regard to esthetic issues, especially in the field of anterior / canine regions – are taught using many different examples.

**MODULE 6 Implantology II: Immediate implantations, computer-guided implantations, sinus floor elevations, bone augmentations**

- Surgical tooth extraction and immediate implantation into the empty (8 aS)
extraction alveolus, early implantation

- Computer-guided implant placement (Guided Implant Surgery) VO, PR, live surgery (12 aS)
- Alveolar ridge augmentations with the aid of transplanted bone blocks from retromolar as well as tooth transplantations VO, live surgery (8 aS)
- Lateral and transcrestal sinus lift, VO and live surgery (9 aS)
- Dental aplasias (3 aS)
- Implant prosthetics I (8 aS)
- LINE_Scientific work (6 aS)
- LINE_Case discussion, case presentation (9 aS)

The module deals with complex implantological procedures, augmentation procedures, and the principles of tooth transplantation. Within the scope of practicals, tissue-sparing extraction procedures and immediate implantations directly afterwards are demonstrated. Computer-based “guided” implantation is taught in practice with the aid of various software programs. In live surgery the surgical procedures of computer-guided implant placement, tooth transplantations as an alternative to implantological management, and transcrestal and lateral sinus floor elevations are shown.

**MODULE 7 Implantology III: Complex bone augmentations and bone reconstructions, preprosthetic surgery and zygoma implants**

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<td>Written and oral performance verification, cooperation</td>
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- "ALL on four" concept – live surgery (4 aS)
- Autologous bone harvesting for augmentation and reconstruction in the case of extensive jawbone deficits (4 aS)
- Bone augmentation in the field of severely atrophic alveolar ridge sections – live surgery (6 aS)
- Complex orthodontic augmentation and implantation procedures (2 aS)
- Dissection course at the Anatomical Institute on the topic of bone harvesting and complex orthodontic implantological procedures (8 aS)
- Preprosthetic surgery (2 aS)
- Medication-associated osteonecrosis of the jawbones (2 aS)
- Clinical use of growth factors and tissue regeneration (4 aS)
- Preprosthetic surgery – live surgery (4 aS)
- Oral implantology for the treatment of tumor and trauma patients (4 aS)
- Implant prosthetics II (8 aS)
- LINE_Scientific work (6 aS)
- LINE_Case discussion, case presentation (9 aS)

The module imparts knowledge about the principles of complex augmentation procedures in the field of jawbones and advanced procedures in implantology, which are practiced within the scope of human cadaver courses. Multiple live surgery shows the procedures of harvesting autologous bone and preprosthetic surgical procedures. This module also teaches theoretical and practical knowledge of the principles of intraosseous oral implants in tumor and trauma patients as well as the principles of implant prosthetics.

**MODULE 8 Implant prosthetics III: Occlusion**

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<td>Written and oral performance</td>
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- Oral implantology for the treatment of tumor and trauma patients (4 aS)
- Implant prosthetics II (8 aS)
- LINE_Scientific work (6 aS)
- LINE_Case discussion, case presentation (9 aS)
theory and digital dentistry verification, cooperation

- Etiology, diagnosis, and treatment concept for jawbone issues caused by malocclusion
- Splint therapy with bite elevation and functional reconstruction of the periodontally impaired bite
- Reconstruction of bite in cases of aplasia and tumor resection
- Introduction to digital dentistry (CAI/CAD/CAM)
- Use of CAD/CAM in splint therapy and implantation
- Digital workflow for the reconstruction of occlusion in implant prosthetics
- LINE_Scientific work
- LINE_Case discussion, case presentation

The module deals with state-of-the-art knowledge of functional and dysfunctional occlusion. This module is also concerned with interdisciplinary treatment of cases with severe, structural and functional dentition disorders, caused by aplasia and tumor resection or periodontal diseases, by means of implants. In addition, state-of-the-art knowledge and the technology of digital medicine are learned and use of the intraoral scan, the 3D printer as well as CAD/CAM in splint therapy and implant reconstruction are taught.

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<tr>
<th>Modules</th>
<th>Academ. hours</th>
<th>ECTS</th>
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<tr>
<td>1–8</td>
<td>504</td>
<td>70</td>
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<tr>
<td>Master thesis</td>
<td>-</td>
<td>20</td>
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<tr>
<td>TOTAL</td>
<td>504</td>
<td>90</td>
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Apart from module-specific and practical content, the following will be held in individual modules for accompaniment:
(i) Scientific work (Modules 1–8)
(ii) Case presentation and case discussion (Modules 2–8)

§ 7 Practice

The university course participants shall have an opportunity to conduct patient treatment independently (premises and patient base) outside the university course in order to be able to handle the patient cases required for successful completion of the university course. A license to treat patients in Austria is not required if patient treatment takes place abroad. Compliance with the legal regulations for independent treatment of patients abroad is the responsibility of the university course participants.

§ 8 Recognition of examinations

On application by the course participant the curriculum director will make a decision concerning the recognition of work completed at university institutions. A maximum of 20% of the ECTS credits of the examinations specified in the curriculum can be recognized.
§ 9 Master thesis

(1) A master thesis shall be written within the scope of the university course in "Periodontology and Implantology". Permission to defend the master thesis requires that the examinations in modules 1-8 have been completed.

(2) The master thesis shall always be written by course participants in the form of an individual thesis. Partner theses and group theses are, however, permissible if the work conducted by the individual course participants can be evaluated separately.

(3) The topic of the master thesis can be selected from the field of the university course in "Periodontology and Implantology". The topic of the master thesis shall be decided in agreement with the tutor and be approved by the academic course director of the university course. Verification of the quality of the topic of the master thesis shall take place in a specific quality circle made up of at least three persons from the academic university staff of the Medical University of Vienna (§ 94 Para. 2 UG) with authorization to teach at a university or an equivalent qualification and is conducted by analogy with the procedure in the diploma course of study in Dentistry (N 203).

(4) As equivalent evidence for the master thesis, an original scientific paper accepted by a peer-reviewed top-class or standard journal for publication or already published by the same can be presented, provided it was written in the period of participation in the university course. The course participant shall be a senior author and the thesis must be written in English. In addition, the publication for successful recognition as substitute work for the master thesis of the university course in "Periodontology and Implantology" shall address a topic of the university course and take the form of personal work, with an introduction, objectives, publication, and discussion. Equivalence of the scientific work shall be decided by the academic course director after submission to the quality circle of the University Clinic of Dentistry (QZ).

(5) Preparation of the written master thesis shall be accompanied and evaluated by a tutor. Course participants shall have a right of nomination depending on the available tutors. Course participants shall search for tutors on their own. Tutors must meet the criteria by analogy with the tutors for diploma theses at the Medical University of Vienna and be approved by the academic course director of the university course.

(6) For preparation of the master thesis the existing guidelines for writing the diploma thesis of the diploma course of study in Dentistry (N 203) shall apply.

(7) The master thesis approved by the tutor shall be sent to an external expert for peer review, who conducts an evaluation based on a template. The peer reviewer of the master thesis shall be appointed by the course director and shall meet the criteria for tutoring diploma theses at the Medical University of Vienna.

(8) If the master thesis is given a negative assessment, § 17a Para. 12 of the 2nd section of the statutes of the Medical University of Vienna, Bulletin of academic year 2003/2004, No. 22, 9th part, as amended ("Statutes"), shall apply.

§ 10 Presence obligation

(1) Attendance of the modules / courses is obligatory. The amount of justified absences per course may not exceed 20% of the specified presence times. At all events at least 80% of the specified presence times of courses shall be completed.
(2) If the number of missed hours exceeds the permissible amount per course, the academic course director shall decide, on application in writing by the student, whether the master thesis may be defended, whether the module (the course) has to be repeated, or whether substitute work can be performed.

(3) Justified absences (e.g., illness, bereavement) from courses can be tolerated to a certain extent (figure for guidance: 20% of total course duration). Relevant evidence of absences shall be produced. If permitted by the topic of the course, in justified isolated cases (e.g., absences of more than 20%) opportunities for repetition and/or substitute work can also be offered. The necessity to produce substitute work or repeat the module (the course) shall be decided by the academic course director in individual isolated cases.

§ 11 Examination regulations

(1) Examinations in the university course of "Periodontology and Implantology" are comprised of:

- Study-accompanying examinations in the examination subjects
- Master thesis
- Final board examination (incl. defence of the master thesis)

(2) Study-accompanying examinations:

These aim to establish whether the course participants have gained a thorough overview of the learning objectives. Within the scope of the university course in "Periodontology and Implantology" the following types of examination shall be used:

1. Course examinations:
   These are examinations at the end of a course. They can be held in the form of a final oral or written examination. Participants shall be informed of the examination method in a suitable manner prior to commencement of the course.

   (a) Oral examination:
   Oral examinations are held by the examiners in the form of one-to-one interviews or in the form of a presentation.

   (b) Written examinations:
   In the case of written examinations the examination questions shall be answered in writing.

2. Courses of an inherent examination nature:
   Assessment in the case of courses of an inherent examination nature does not take place on the basis of an individual examination action at the end of the course but on the basis of regular written (e.g., seminar paper) and/or oral contributions (e.g., oral presentation) by participants, continuous monitoring/verification of the prescribed presence obligation.

   The examiner in study-accompanying examinations is usually the lecturer whose course the course participant has attended.

(3) Defence of the master thesis
The master thesis shall be defended within the scope of a public examination before the board of examiners. The prerequisites for participating in defence of the master thesis are as follows:

- Attendance of all the modules of the university course (at least 80% presence)
- Positive completion of all study-accompanying examinations
- Positive assessment of the master thesis

(4) At the end of the university course in "Periodontology and Implantology" there will be a final board examination that covers the following content:

- Scientific discussion
- Demonstration of a research design followed by implementation
- Verification of the knowledge of scientific literature
- Knowledge of the theoretical and practical content of the curriculum and the scientific literature recommended in the courses

(5) The examination board shall be made up of three scientifically suitable members. The members of the examination board shall be appointed from the academic course staff, whereby at least one person shall hold authorization to teach at a university (§§ 102ff UG) or an equivalent qualification and be an employee of the Medical University. One member shall be appointed as chair of the examination board. The resolutions of the examination board shall be passed by a majority of votes. The curriculum director can also be called in to (final) board examinations as an examiner.

(6) Non-attendance of an examination

If examination candidates are prevented from attending an examination by illness or another reason worthy of consideration and if they have announced that fact in writing or orally in good time, the relevant examinations shall be repeated as soon as possible.

(7) The examination procedure shall conform to §§ 72ff UG and the relevant provisions (§§ 14 ff) of the 2nd section of the Statutes of the Medical University of Vienna.

§ 12 Methods of grade allocation

(1) Assessment shall conform to §§ 72 ff UG and the relevant provisions (§§ 14 ff) of the 2nd section of the Statutes of the Medical University of Vienna.

(2) Positive completion of the course shall be assessed in the form of an overall grade. The overall grade shall be a "pass" if all the examinations prescribed in this curriculum have received a positive assessment and the overall assessment shall be "with distinction" if in none of the subjects the assessment was worse than "good" and in at least half of the subjects the assessment given was "very good".

(3) The overall grade is made up of

- Study-accompanying examinations
- Master thesis
- Defence of the master thesis
- Final board examination
§ 13 Premature termination

Training shall be deemed to have been discontinued if the course participant is absent from more than 20% of the (tuition) hours per course / module without any excuse. In the event of excused absence for more than 20% of the (tuition) hours the course participant shall attend the theoretical training at a later date, depending on what is being offered and the available places.

§ 14 Completion and academic degree

(1) The university course in "Periodontology and Implantology" has been completed successfully if all the prescribed examinations and the master thesis have received a positive assessment in accordance with the examination regulations.

(2) Successful completion of the university course shall be evidenced by means of a final certificate and the academic degree of "Master in Clinical Dentistry - Periodontology and Implantology" - abbreviated to "MClinDent (Periodontology and Implantology)" - shall be awarded in the form of notification by the Medical University of Vienna.

(3) The final certificate shall list the individual modules and the courses assigned to them along with their total number of hours and their individual grades. Courses where the success of participation was evaluated as "successfully attended / unsuccessfully attended" shall be listed in addition. The topic and the overall grade of the written master thesis shall also be indicated. The final certificate must show the ECTS credit points.

§ 15 Effective date

This curriculum shall enter into force on the first day of the month that follows its official announcement.