**Module ‘Basic theory I’**

<table>
<thead>
<tr>
<th>Obligatory module</th>
<th>CP 9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content:</strong> The module teaches the current status of the science of oral implantology by way of lectures, seminars, patient demonstrations and practical work on the phantom. In addition work will be begun on the foundations for independent scientific work.</td>
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<tr>
<td><strong>Aims of module and skills taught:</strong> Independent planning of simple prosthetic implant therapies on host bone.</td>
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</tr>
<tr>
<td><strong>Frequency of module:</strong></td>
<td>each semester</td>
</tr>
<tr>
<td><strong>Duration of module:</strong></td>
<td>one semester</td>
</tr>
<tr>
<td><strong>Requirements for participation in the module:</strong></td>
<td>None</td>
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<tr>
<td><strong>Language of course and examinations:</strong></td>
<td>English</td>
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<tr>
<td><strong>Student record (performance certificates / attendance record):</strong></td>
<td>Proof of attendance is to be issued at each teaching unit</td>
</tr>
<tr>
<td><strong>Cumulative module examinations and examination format:</strong></td>
<td>One cumulative module examination per teaching unit in the form of a written assessment/essay under examination conditions</td>
</tr>
<tr>
<td><strong>Admission requirements for cumulative module examinations:</strong></td>
<td>Attendance record for the relevant teaching unit</td>
</tr>
<tr>
<td><strong>Requirements for attaining CP:</strong></td>
<td>Passing of the 3 cumulative module examinations</td>
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<tr>
<td><strong>Module supervisor:</strong></td>
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<table>
<thead>
<tr>
<th>Teaching units:</th>
<th>Type</th>
<th>SWS</th>
<th>Semester / CP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td><strong>Foundations of dental implantology</strong></td>
<td>Lect.</td>
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<tr>
<td><strong>Oral diagnostics and treatment planning</strong></td>
<td>Lect. / Sem.</td>
<td>2</td>
<td>X</td>
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<tr>
<td><strong>Technical requirements and dental assistants</strong></td>
<td>Lect. / Sem.</td>
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<tr>
<td><strong>Methods of scientific work (I)</strong></td>
<td>Lect / Sem.</td>
<td>0.5</td>
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</tbody>
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Preparation time: 120 hours
Processing time: 80 hours

**Content of teaching units:**

*Foundations of dental implantology*
Overview of the development of dental implantology
Anatomy and physiology
Wound healing: bone, soft tissue; wound healing deficits
Implant materials: bone replacement materials; membranes; auxiliary materials
Patient evaluation: anamnesis, absolute/relative contraindications
Tooth rehabilitation (endodontics/periodontics) or extraction

*Oral diagnostics and treatment planning*
Indication; classification; guidelines
Oral hygiene and pre-treatment (periodontal / tooth rehabilitation / jaw orthopaedics)
Clinical bite and function analysis, occlusion, TMJ, mucous membranes
Picture diagnostics (x-rays, CT, stereolithography)
3-D bone analysis (standard, CT supported)
Wax-up/set-up, involvement of dental laboratory
Standard positioning templates, CT-based drilling jig

*Technical requirements and dental assistants*
Required instruments and equipment
Hygiene regulations and their implementation
Tasks of the dental assistant
Patient preparation: anaesthetics, OP smock, ancillary medication etc.
Postoperative treatment
Emergencies, emergency management

*Methods of scientific work (I)*
Literature research via electronic media
Introduction to preparation of Master’s dissertation
e-learning
Module ‘Basic theory II’

| Obligatory module | CP 9 |

**Content:** The module teaches the current status of the science of oral implantology by way of lectures, seminars, patient demonstrations and practical work on the phantom. In addition work will be begun on the foundations for independent scientific work.

**Aims of module and skills taught:** Independent planning of simple prosthetic implant therapies on host bone and independent surgical and prosthetic work on the patient simulator.

**Frequency of module:** each semester

**Duration of module:** one semester

**Requirements for participation in the module:** Module ‘Basic theory I’

**Language of course and examinations:** English

**Student record (performance certificates / attendance record):** Proof of attendance is to be issued at each teaching unit

**Cumulative module examinations and examination format:** One cumulative module examination per teaching unit in the form of a written assessment/essay under examination conditions

**Admission requirements for cumulative module examinations:** Attendance record for the relevant teaching unit

**Requirements for attaining CP:** Passing of the 3 cumulative module examinations

**Module supervisor:**

**Teaching units:**

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<tr>
<th>Type</th>
<th>SWS</th>
<th>Semester / CP</th>
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<tbody>
<tr>
<td>X</td>
<td></td>
<td>1 2 3 4</td>
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<tr>
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<td>X</td>
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</table>

**Preparation time:** 120 hours

**Processing time:** 80 hours

**Content of teaching units:**

**Implant systems**
- Implant design (macrostructure)
- Implant surfaces (microstructure)
- Dental implant abutment, indexed / non-indexed abutment
- Mechanical fixings, micro fissures
- Aids for transfer, registration and impression
- Abutments (chair side and lab side)
- Prosthetic components

**Standard surgical procedures**
- Flap design, transfer of implant position, flapless surgery
- Assessment of bone quality
- Bone condensing, bone expanding
- Machine / manual preparation techniques
- Extrication techniques
- Healing periods, timing (early, late, immediate treatment records)
- Improvement of structure by bone training

**Basic prosthetic treatments**
- Temporary treatments
- Techniques for the forming of emergence profiles
- Taking of impressions / registration / fabrication of models / articulator
- Choice of abutment and individualisation
- Abutment transfer model-mouth
- Occlusal anatomy and transfer of load

**Methods of scientific work (II)**
- Assessment of scientific theory using evidence classes
- Data collection, statistics, biometrics
- Construction of scientific studies
Module ‘Surgical techniques’

Obligatory module CP 10

Content: The module analyses the current status of surgical techniques in oral implantology by way of lectures, seminars, patient demonstrations and practical work on the phantom.

Aims of module and skills taught: Independent planning of complex prosthetic implant therapies and independent surgical procedures on patients.

Frequency of module: each semester

Duration of module: two consecutive semesters

Requirements for participation in the module: Modules ‘Basic theory I’ and ‘Basic theory II’

Language of course and examinations: English

Student record (performance certificates / attendance record): Proof of attendance is to be issued at each teaching unit

Cumulative module examinations and examination format: One cumulative module examination per teaching unit in the form of a written assessment/essay under examination conditions

Admission requirements for cumulative module examinations: Attendance record for the relevant teaching unit

Requirements for attaining CP: Passing of the 4 cumulative module examinations

Module supervisor:

Teaching units: Type SWS Semester / CP

| Advanced surgical techniques (1) | Lect. / Prac. | 1.5 | 1 | X |
| Advanced surgical techniques (2) | Lect. / Prac. | 1.5 | 2 | X |
| Advanced surgical techniques (3) | Lect. / Prac. | 1.5 | 3 | X |
| Aftercare (postoperative treatment) / management of complications | Lect / Prac. | 0.5 | 4 | X |

Preparation time: 140 hours
Processing time: 90 hours

Content of teaching units:

Advanced surgical techniques (1)
Bone augmentation using synthetic, xenogenous, allogenous materials
Membranes, membrane techniques
Bone augmentation using oral autogenous bone (block, particulated)
Sinus augmentation, one-sided/two-sided

Advanced surgical techniques (2)
Nerve transposition
Distraction osteogenesis
Extra-oral bone transplants
Microvascular reanastomosed tissue transfer
Reconstruction of severely reabsorbed maxilla and mandibule

Advanced surgical techniques (3)
Soft tissue management
Pedicle flap soft tissue transplants
Free connective tissue transplants
Free epithelial transplants
Vestibulum reconstruction

Aftercare (postoperative treatment) / management of complications
Documentation and recall
Statistics: success and survival rates, failure rates
Mucousitis and periimplantitis: diagnosis and treatment
Explantations
Module ‘Implant prosthetics’

**Content:** The module analyses the current status of prosthetic implants in oral implantology by way of lectures, seminars, patient demonstrations and practical work on the phantom.

**Aims of module and skills taught:** Independent planning of complex prosthetic implant therapies and independent prosthetic implants on patients.

**Frequency of module:** each semester

**Duration of module:** two consecutive semesters

**Requirements for participation in the module:** Modules ‘Basic theory I’ and ‘Basic theory II’

**Language of course and examinations:** English

**Student record (performance certificates / attendance record):** Proof of attendance is to be issued at each teaching unit

**Cumulative module examinations and examination format:** One cumulative module examination per teaching unit in the form of a written assessment/essay under examination conditions

**Admission requirements for cumulative module examinations:** Attendance record for the relevant teaching unit

**Requirements for attaining CP:** Passing of the 3 cumulative module examinations

**Module supervisor:**

<table>
<thead>
<tr>
<th>Teaching units:</th>
<th>Type</th>
<th>SWS</th>
<th>Semester / CP</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Permanent implants</td>
<td>Lect. / Prac.</td>
<td>2</td>
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<tr>
<td>Removable implants</td>
<td>Lect. / Prac.</td>
<td>2</td>
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<tr>
<td>Aftercare (postoperative treatment) / management of complications</td>
<td>Lect. / Prac.</td>
<td>1</td>
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</table>

Preparation time: 140 hours
Processing time: 90 hours

**Content of teaching units:**

**Permanent implants**
- Single tooth replacement
- Treatment with multiple single crowns
- Bridge supplies
- Tooth implant borne restorations
- Procedures in the treatment chair and in the laboratory
- Restorative materials (metal alloys, ceramics, composites)

**Removable implants**
- Simple retention elements (pins, ball anchorage, magnetic attachments)
- Complex retention elements (telescopics, bars)
- Arrangement of remaining teeth
- Procedures in the treatment chair and in the laboratory
- Intraoral bonding
- Structure of prosthetic bases

**Aftercare (postoperative treatment) / management of complications**
- Documentation and recall
- Statistics: success and survival rates, failure rates
- Oral hygiene
- Complications with technical components
Module ‘Placement’        Obligatory module         CP 9

Content: This module involves the intensive supervision of students, who learn passively from teachers during the observation of live patient treatments. The treated cases will deepen the theoretical knowledge of the student, in particular through the requirement for the student to prepare and subsequently process the case in writing. This module is conducted either at the University Zahnklinik Frankfurt am Main or at an accredited teaching affiliate (teaching dental practice).

Aims of module and skills taught: The clinical competence of the student is improved through experience of live patient treatments. The aim is the independent written and literature-based analysis of planned therapies and the demonstrated treatment stages.

Frequency of module: each semester
Duration of module: 10 days
Requirements for participation in the module: Module ‘Basic theory I’

Language of course and examinations: English

Student record (performance certificates / attendance record) Proof of attendance is to be issued

Cumulative module examinations and examination format: OSCE examination with anamnesis station, examination and diagnosis station with patient simulator and patient management station.

Admission requirements for cumulative module examinations: Attendance record
Requirements for attaining CP: Passing of the final module examination

Module supervisor:

<table>
<thead>
<tr>
<th>Teaching units:</th>
<th>Type</th>
<th>SWS</th>
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</table>

Preparation time: 110 hours
Processing time: 69 hours
Module ‘Supervision’        Obligatory module        CP 3

**Content:** This module involves the independent treatment of 3 patients in either the practice or clinic to which the student has been assigned, an accredited affiliated practice or in the University Zahnklinik under the supervision of a teacher or accredited tutor, with supervision of and teaching on techniques and methods.

**Aims of module and skills taught:** The clinical competence and manual skills of the student will be improved through active supervised patient treatment. The aim is the independent performance of surgical procedures and prosthetic treatments on patients and the development of critical, reflective, professional competence.

<table>
<thead>
<tr>
<th>Frequency of module:</th>
<th>each semester</th>
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<tbody>
<tr>
<td>Duration of module:</td>
<td>3 days</td>
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<tr>
<td>Requirements for participation in the module:</td>
<td>Module ‘Placement’</td>
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<td>Language of course and examinations:</td>
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<td>Student record (performance certificates / attendance record):</td>
<td>Three performance certificates are to be issued. A performance certificate will be issued for each successful surgical procedure or prosthetic implant treatment on a patient.</td>
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<tr>
<td>Cumulative module examinations and examination format:</td>
<td>Oral examination</td>
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<td>Admission requirements for cumulative module examinations:</td>
<td>5 performance certificates</td>
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<td>Requirements for attaining CP:</td>
<td>Passing of the final module examination</td>
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<td>Module supervisor:</td>
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<tr>
<td>Teaching units:</td>
<td>Type</td>
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Preparation time: 35 hours
Processing time: 20 hours
Module ‘Patient Treatment’       Obligatory module CP 20

Content: This module involves the treatment of 20 patients in a practice or clinic without the supervision of a teacher or accredited tutor. The following indications must each have been given for at least two patients:

a) Treatment of single tooth (class I), aesthetic treatment in front area
b) Bridge treatment (class IIa, b)
c) Bridge or telescopic bridge treatment (class IIC)
d) Bridge or telescopic bridge treatment (class III) in upper jaw
e) Bridge or telescopic bridge treatment (class III) in lower jaw
f) Bridge or single tooth treatment in combination with an external sinus lift

Aims of module and skills taught: The clinical competence and manual skills of the student will be improved through live patient treatment. The aim is the independent performance of surgical procedures and prosthetic treatments on the patient and the development of critical, reflective, professional competence.

Frequency of module: each semester

Duration of module: two consecutive semesters; in the event of a lack of patients, the duration of this module may be extended by up to three months.

Requirements for participation in the module: Module ‘Placement’

Language of course and examinations: English

Student record (performance certificates / attendance record): 20 performance certificates are to be issued pursuant to section 13

Cumulative module examinations and examination format: Practical examination

Admission requirements for cumulative module examinations: 20 performance certificates

Requirements for attaining CP: Passing of the final module examination

Module supervisor:

Teaching units: Type SWS Semester / CP

1 2 3 4

Preparation time: 400 hours
Processing time: 200 hours
Module ‘Masterthesis’

<table>
<thead>
<tr>
<th>Obligatory module</th>
<th>CP 20</th>
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</thead>
</table>

**Content:** The Masterthesis shall be on a topic from the field of oral implantology and shall be written independently by the student on the basis of research in relevant literature and study of scientific techniques.

**Aims of module and skills taught:** The Masterthesis is designed to demonstrate that the student is in a position to independently analyse and assess a topic within the field of oral implantology within a prescribed period using scientifically recognised methods.

**Frequency of module:** each semester

**Duration of module:** 6 months

**Requirements for participation in the module:** Module ‘Basic theory I’

**Language of course and examinations:** English

**Student record (performance certificates / attendance record)**

**Final module examination and examination format:** Completion of thesis and thesis presentation

**Requirements for attaining CP:** Passing of final module examination

**Module supervisor:**

**Teaching units:**

<table>
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<th>Type</th>
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<tbody>
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| Preparation time: 550 hours |
| Processing time: 50 hours |

**Calculation of CP for the Master’s study programme ‘Master of Oral Implantology’**

<table>
<thead>
<tr>
<th>Module</th>
<th>CP</th>
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<tbody>
<tr>
<td>Basic theory I</td>
<td>9.0</td>
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<tr>
<td>Basic theory II</td>
<td>9.0</td>
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<tr>
<td>Surgical techniques</td>
<td>10.0</td>
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<tr>
<td>Implant prosthetics</td>
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<tr>
<td>Placement</td>
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<td>Supervision</td>
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<td>Patient treatment</td>
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<td>Masterthesis</td>
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<tr>
<td><strong>Total</strong></td>
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