

**Module Manual: Postgraduate Program**  
**Personalized Oral Implantology and Periodontology**

<b>Module 1</b>	<b>Scientific work and documentation - scientific communication</b> Wissenschaftliches Arbeiten und Dokumentation – wissenschaftliche Kommunikation						[Module code]
<b>Mandatory or Elective module</b>	<b>Mandatory module</b>						
<b>Credit points (CP) and workload</b>	<b>10 (7+3) CP = 300h</b>						
<b>Module duration</b> (according to the study plan)	<b>2 Semesters</b>						
<b>Courses/ Learning formats</b>	<b>Typ</b>	<b>Regular term when starting in winter term</b>	<b>Mandatory /Elective</b>	<b>Contact time – (hours per week per semester) (SWH)</b>	<b>Self-study</b>	<b>Credit points</b>	
<i>Part 1 - Scientific work and documentation Seminar</i>	Sem.	1. Semester	Mandatory	2 SWH	39 h	2 CP	
<i>Exercise in small groups</i>	Small Group Training	1. Semester	Mandatory	3 SWH	58,5 h	3 CP	
<i>Dental Photography and Digital Documentation</i>	Prac.	1. Semester	Mandatory	2 SWH	39h	2 CP	
<i>Part 2 – Scientific communication Seminar</i>	Sem.	2. Semester	Mandatory	1 SWH	19,5 h	1 CP	
<i>Exercise in small groups</i>	Small Group Training	2. Semester	Mandatory	2 SWH	39h	2 CP	
<b>To be able to complete the module, apart from regular participation in the courses, you have to fulfill the following requirements:</b>							
Mandatory attendance	Small Group Training, Prac.						
Active participation	according to § 5 para. 3						
Course work	Create a poster as well as a short scientific lecture (10 minutes duration) and their presentations						
Module examination	Written exam (45 min.).						
<b>Qualification goals/learning outcomes/competences</b>							
<b>With regular participation, the students can/know at the end of the course</b>							
<b>Part 1 - Scientific work and documentation:</b>							
<ul style="list-style-type: none"> <li>- Transfer problems into precise scientific challenges,</li> <li>- Research problems in specialized or literature databases.</li> <li>- Use collected and critically appraised primary and secondary evidence to make decisions about an issue. ( Correct Decision Making)</li> <li>- Plan and conduct a scientific investigation</li> <li>- Name possible scientific methods and scientifically derive and justify their selection.</li> <li>- Apply statistical methods for hypothesis testing</li> <li>- Operationalize study variables</li> <li>- Apply and justify sampling techniques</li> <li>- Apply and justify experimental designs</li> <li>- Apply and justify bias control techniques</li> <li>- Apply the basic principles of project management to an investigation</li> </ul>							
<b>Part 2 - Scientific Communication:</b>							
<ul style="list-style-type: none"> <li>- Prepare scientific results for a professional audience according to the rules of scientific publications.</li> <li>- Communicate appropriately with the respective editorial boards.</li> <li>- Present scientific results orally to an expert audience</li> </ul>							

<b>Module 1</b>	<b>Scientific work and documentation - scientific communication</b> Wissenschaftliches Arbeiten und Dokumentation – wissenschaftliche Kommunikation	[Module code ]
<b>Contents</b>		
<b>Part 1 - Scientific work and Documentation:</b> <ul style="list-style-type: none"> <li>- Databases: Medline, PubMed, Cochrane</li> <li>- Original papers, reviews, meta-analyses, phase concepts of clinical trials</li> <li>- Randomized controlled trial, cohort study, prognosis, and risk studies</li> <li>- Randomization, matching, holding constant, blinding, balancing</li> <li>- Effect sizes,</li> <li>- Structured personal documentation (Dental Photography)</li> <li>- Time planning and management, subject acquisition, data processing, documentation</li> <li>- Test for independent and dependent data, Parametric and non-parametric methods</li> <li>- Problems of multiple testing adaptive designs</li> <li>- Variable validity, generalizability, internal, external, and statistical validity</li> </ul> <b>Part 2 - Scientific communication:</b> <ul style="list-style-type: none"> <li>- Scientific Writing</li> <li>- Author Guidelines</li> <li>- Poster production</li> <li>- Scientific talk</li> <li>- Coaching</li> </ul>		
<b>Recommended prerequisite(s) for the module or individual courses of the module</b>		
none		
<b>Access requirement(s)</b>	none	
<b>Language(s) of instruction and examination(s)</b>	English	
<b>Weight of the module grade in the overall grade</b>	10/60	
<b>Frequency of Occurrence</b>	Part 1: SuSe Part 2: WiSe (annual rotation)	
<b>Reasons for the mandatory attendance</b>	According to the University Rules (HochschuleG) § 26 Abs. 2 (7), Practical course, Internship	
<b>Course Director</b>	Dr. rer. physiol. Anke Hollinderbäumer, MME	
<b>Usability of the module in other degree programs</b>	none	
<b>Other</b>	Seminar via e-learning (online seminar with MCQs)	

<b>Module 2</b>	<b>Fundamentals of Surgery</b> Grundlagen Chirurgie					[Module code ]
<b>Mandatory or elective module</b>	<b>Mandatory module</b>					
<b>Credit points (CP) and workload</b>	<b>8CP = 240h</b>					
<b>Module duration</b> (according to the study plan)	<b>1 Semester</b>					
<b>Courses/forms of learning</b>	<b>Art</b>	<b>Regular semester begins in WiSe</b>	<b>Mandatory/Elective</b>	<b>Contact time - (SWH)</b>	<b>Self-study</b>	<b>Credit points</b>
<i>Basics Surgery Seminar</i>	LEC	Semester 1	Mandatory	4 SWH	78 h	4 CP
<i>Internship / Patient Cases</i>	Prac	Semester 1	Mandatory	4 SWH	78 h	4CP
<b>To be able to complete the module, apart from regular participation in the courses, the following achievements must be made:</b>						
Presence	Practical					
Active Participation	according to § 5 para. 3					
Course achievement(s)	Case Planning and Presentation Of the planning ( Oral Presentation approx. 15 min ) "As an Application on the practical Course)					
Module Exam	MCQ exam (45 min.) On the Seminar					
<b>Qualification goals/learning outcomes/competences</b>						
<b>With regular participation, the students can/know at the end of the course</b>						
<b>Fundamentals of Surgery:</b>						
<ul style="list-style-type: none"> <li>- Differential diagnostic and therapeutic knowledge in simple procedures of dentoalveolar endodontic, pre-prosthetic and oral surgery</li> <li>- Intra- and perioperative complications and dentoalveolar traumatology</li> <li>- Basic knowledge of the systematics and differential diagnostics of oral mucosal changes</li> <li>- Basic knowledge of cysts and odontogenic tumors</li> <li>- Basic knowledge about tumors in the oral cavity</li> </ul>						
<b>Content</b>						
<b>Fundamentals of Surgery:</b>						
<ul style="list-style-type: none"> <li>- Endodontic surgery</li> <li>- Pre-prosthetic surgery</li> <li>- Dental trauma</li> <li>- Tooth exposure and surgical removal of teeth</li> <li>- Intraoperative complication management</li> <li>- Surgery of cysts and odontogenic tumors</li> <li>- Oral mucosal changes</li> <li>- Intraoperative and postoperative complication management</li> </ul>						
<b>Recommended prerequisite(s) for the module or individual courses of the module</b>						
none						
<b>Access requirement(s)</b>	none					
<b>Language(s) of instruction and examination(s)</b>	English					
<b>Weight of the module grade in the overall grade</b>	8/60					
<b>Frequency of Occurrence</b>	WiSe:					
<b>Course Director / Coordinator</b>	Dr. med. dent. Peter Schulz,					
<b>Usability of the module in other degree programs</b>	no					
<b>Other</b>	Seminar via e-learning (online seminar and MCQquestions) Hands-On Case presentations					

<b>Module 3</b>	<b>Fundamentals of Periodontology</b> Grundlagen für Parodontologie					[Module code]
<b>Mandatory or Elective module</b>	<b>Mandatory module</b>					
<b>Credit points (CP) and workload</b>	5 CP = 150h					
<b>Module duration</b> (according to the study plan)	1 Semester					
<b>Courses/forms of learning</b>	<b>Art</b>	<b>Regular semester begins in WiSe</b>	<b>Mandatory/ Elective</b>	<b>Contact time - (SWH)</b>	<b>Self-study</b>	<b>Credit points</b>
<i>Basics Surgery Seminar</i>	Sem	Semester 2	Mandatory	4 SWH	58,5 h	3 CP
<i>Internship / Patient Cases</i>	Prac	Semester 2	Mandatory	2 SWH	39 h	2 CP
<b>To be able to complete the module, apart from regular participation in the courses, the following achievements must be made:</b>						
Presence	Practical					
Active Participation	according to § 5 para. 3					
Course achievement(s)	Case Planning and Presentation Of the planning ( Oral Presentation approx. 15 min )					
Module Exam	MCQ exam (45 min.) On the Seminar					
<b>Qualification goals/learning outcomes/competencies</b>						
<b>After regular participation, the students can/know at the end of the course</b>						
<ul style="list-style-type: none"> <li>- Diagnosis and differential diagnosis of complex periodontal diseases</li> <li>- Identify periodontal risk factors</li> <li>- Carry out specific periodontal treatment concepts</li> <li>- Create complex treatment plans of systematic PA therapy and differential indication</li> <li>- Competent patient management, patient motivation, oral hygiene instructions, organization, and, execution of the recall.</li> <li>- Systematic periodontal therapy</li> <li>- perform resective, regenerative, and plastic aesthetic procedures</li> <li>- Implement peri-implantitis therapies</li> <li>- Implement periodontology concepts for compromised patients.</li> </ul>						
<b>Content</b>						
<ul style="list-style-type: none"> <li>- The new classification of periodontal and peri-implant diseases and conditions</li> <li>- Etiology and diagnostics of periodontal diseases</li> <li>- Differential diagnosis (of oral mucosal diseases, oral manifestations of systemic diseases)</li> <li>- Diagnostic measures (Clinical, Radiological and Microbiological Tests)</li> <li>- Documentation and photo documentation of periodontal cases</li> <li>- Drug therapy (endocarditis prophylaxis, infection prophylaxis, systemic administration of antibiotics following periodontitis therapy or periodontal surgery, drugs with effect on gingiva/periodontium).</li> <li>- Systematic periodontal therapy (therapy concepts, complete path from initial therapy to supportive periodontal therapy, recall system)</li> <li>- Resective periodontal therapy (therapy concepts)</li> <li>- Regenerative periodontal therapy (therapy concepts)</li> <li>- Plastic-aesthetic periodontal therapy (therapy concepts)</li> <li>- Peri-implantitis therapy (therapy concepts)</li> <li>- Endo-perio lesions, perio-prosthetics, perio-jaw orthopedics</li> <li>- Periodontology in compromised patients</li> </ul>						
<b>Recommended prerequisite(s) for the module or individual courses of the module</b>						
none						

<b>Module 3</b>	<b>Fundamentals of Periodontology</b> Grundlagen für Parodontologie	[Module code]
<b>Access requirement(s)</b>	none	
<b>Language(s) of instruction and examination(s)</b>	English	
<b>Weight of the module grade in the overall grade</b>	5/60	
<b>Frequency of Occurrence</b>	SuSe:	
<b>Reasons for the mandatory attendance</b>	According to the University Rules (HochschG) § 26 Abs. 2 (7), Practical course, Internship	
<b>Usability of the module in other degree programs</b>	no	
<b>Other</b>	Seminar via e-learning (online seminar and MCQs) Hands-On Case presentations	

<b>Module 4</b>	<b>The compromised patient: general and special basics for implantology and periodontology</b> Der kompromittierte Patient: allgemeine und spezielle Grundlagen für Implantologie und Parodontologie					[Module code ]
<b>Mandatory or elective module</b>	<b>Mandatory module</b>					
<b>Credit points (CP) and workload</b>	<b>9 (6+3) CP = 270h</b>					
<b>Module duration</b> (According to the study plan)	<b>2 Semesters</b>					
<b>Courses/ Forms of learning</b>	<b>Art</b>	<b>The standard semester begins in WiSe</b>	<b>Mandatory/Elective</b>	<b>Contact time (SWH)</b>	<b>Self-study</b>	<b>Creditpoints</b>
<i>Part 1 - General basics Seminar</i>	Sem	Semester 2	Mandatory	4 SWH	78h	4 CP
<i>Internship with Patient Cases</i>	Prac	Semester 2	Mandatory	2 SWH	39h	2 CP
<i>Part 2 - Special basics Internship with Patient Cases</i>	Prac	Semester 3	Mandatory	3 SWH	39h	3 CP
<b>To be able to complete the module, apart from regular participation in the courses, the following achievements must be made:</b>						
Presence	Practical					
Active Participation	according to § 5 para. 3					
Course achievement(s)	Mini-CEX for Internship					
Module Exam	MCQ exam (45 min.) on the Seminar					
<b>Qualification goals/learning outcomes/competencies</b>						
<b>After regular participation, students can independently at the end of the course: Part 1 - General basics:</b>						
<ul style="list-style-type: none"> <li>- Reliably detect compromised patient collectives in everyday clinical practice,</li> <li>- Define the characteristic risk factors for general diseases (see below) and classify their severity.</li> <li>- Assess the classical side-effect profiles or interactions of common medication,</li> <li>- If necessary, consult competently with the attending medical colleague (change, discontinuation, or pause of medication).</li> <li>- Competently instruct the patient concerned about special (postoperative) rules of conduct and install an individual recall.</li> <li>- Educate (continuing) dental colleagues about the patient's inherent risk factors and the resulting regime.</li> </ul>						
<b>Part 2 - Special basics:</b>						
<ul style="list-style-type: none"> <li>- Identify patients at risk for (complex) implant and/or periodontal therapies,</li> <li>- Make a valid individual assessment of the benefits vs. Risks of invasive therapy in this population, particularly about possible alternative therapies,</li> <li>- Differentiate between oral and intravenous BP administration in bisphosphonate patients,</li> <li>- Ensure safe, patient-adapted pre-and post-operative care.</li> </ul>						

Contents	
<p><b>Part 1 - general principles:</b></p> <ul style="list-style-type: none"> <li>- Demographic fundamentals: "aging of society</li> <li>- Basics in diagnostics and therapy of common general diseases or locally compromising constellations, e.g. in the case of : <ul style="list-style-type: none"> <li>• Diabetes mellitus</li> <li>• Osteoporosis and Cardiac</li> <li>• Renal insufficiency (dialysis),</li> </ul> </li> <li>- Radiation in the head and neck region,</li> <li>- Autoimmune diseases: especially those with oral (mucosal) manifestations.</li> <li>- Oral effect and side effect profiles of classical drugs:</li> <li>- Anticoagulants, antiresorptive therapy (bisphosphonates), and immunosuppressants</li> <li>- Complication management (bleeding and wound healing disorders)</li> <li>- Importance and indication of peri-operative hygiene measures and anti-infective prophylaxis</li> <li>- Specifically: current guidelines on (blood thinners, AB prophylaxis, and BP)</li> </ul> <p><b>Part 2 - Special basics:</b></p> <ul style="list-style-type: none"> <li>- PA therapy, augmentations, and implantation in patients with antiresorptive medication or radiotherapy in the head and neck region</li> <li>- PA therapy, augmentations, and implantation in anticoagulated patients,</li> <li>- Guidelines (implantation in BP patients, concomitant drug therapy)</li> <li>- Inpatient vs. outpatient treatment of compromised patients</li> </ul>	
Recommended prerequisite(s) for the module or individual courses of the module	
none	
<b>Pre-requisite(s)</b>	Participation in modules 1-3 is recommended
<b>Language(s) of instruction and examination(s)</b>	English
<b>Weight of the module grade in the overall grade</b>	9/60
<b>Frequency of Occurrence</b>	Part 1 SuSe Part 2: WiSe (annual rotation)
<b>Reasons for the mandatory attendance</b>	According to the University Rules (HochschG) § 26 Abs. 2 (7), Practical course, Internship
<b>Usability of the module in other degree programs</b>	no
<b>Other</b>	Seminar via e-learning (online seminar and MCQ )



<b>Module 5</b>	<b>Personalized Implantology</b> Personalisierte Implantologie					<i>Module Code</i>
<b>Mandatory or elective module</b>	<b>Mandatory module</b>					
<b>Credit points (CP) and workload</b>	<b>8 CP = 240h</b>					
<b>Module duration</b> (according to the study plan)	<b>1 Semester</b>					
<b>Courses/ Forms of learning</b>	<b>Art</b>	<b>The standard semester begins in WiSe</b>	<b>Mandatory/ Elective</b>	<b>Contact time (SWH)</b>	<b>Self-study</b>	<b>Credit points</b>
<i>Seminar</i>	Sem	Semester 3	Mandatory	4 SWH	78h	4 CP
<i>Internship with Patient Cases 1</i>	Prac.	Semester 3	Mandatory	2 SWH	39h	2 CP
<i>Internship with Patient Cases 2</i>	Prac.	Semester 3	Mandatory	2 SWH	39h	2 CP
<b>To be able to complete the module, apart from regular participation in the courses, the following achievements must be made:</b>						
Presence	Practical					
Active Participation	according to § 5 para. 3					
Course achievement(s)	DOPS to the internship					
Module Exam	MCQ exam (45 min.) For the Seminar					
<b>Qualification goals/learning outcomes/competencies</b>						
After regular participation, students can independently at the end of the course: <ul style="list-style-type: none"> <li>- Independently plan and carry out complex and aesthetically demanding restorations.</li> <li>- Reliably identify high-risk patients and guide them to a suitable implant restoration (especially in the case of complex restorations: mastering the differential indication)</li> <li>- Reliably identify (systemic) implant risk factors and create patient-specific treatment concepts for all indication groups.</li> <li>- Master the differential indication of augmentative techniques including the associated materials,</li> <li>- Competently evaluate three-dimensional planning and carry out computer-aided techniques.</li> <li>- Establish an individual recall.</li> <li>- Identify and recognize risk factors and clinical signs of peri-implantitis.</li> <li>- Independently recognize and treat peri-implant infections and evaluate their Prognosis</li> </ul>						
<b>Contents</b>						
<ul style="list-style-type: none"> <li>- Tooth preservation vs. implantology (perio-implant Interface)</li> <li>- Compromised implant site (local, systemic causes) and difficult anatomical conditions</li> <li>- Augmentation vs. use of dimensionally reduced implants ("avoid augmentation")</li> <li>- Strategies for alveolar preservation after tooth loss</li> <li>- Immediate implant placement and immediate restoration</li> <li>- Planning and execution of aesthetically demanding restorations (e.g. anterior region)</li> <li>- Differential indications of bone replacement techniques and materials (sinus lift, horizontal and vertical augmentation)</li> <li>- 3D planning for augmentation and/or implantation, CAD-CAM procedure</li> <li>- Computer-assisted implantation and restoration concepts, digital impressions</li> <li>- Failure and complication management</li> <li>- Risk factors for peri-implantitis and assessment of the prognosis for re-implantation</li> <li>- Peri-implantitis therapy (from mucositis and ostitis therapy to explantation)</li> </ul>						
<b>Recommended prerequisite(s) for the module or individual courses of the module</b>						
none						
<b>Access requirement(s)</b>	none					
<b>Language(s) of instruction and examination(s)</b>	German and English					
<b>Weight of the module grade in the overall grade</b>	8/60					
<b>Frequency of Occurrence</b>	WiSe (annual rotation)					
<b>Reasons for the mandatory attendance</b>	According to the University Rules (HochschG) § 26 Abs. 2 (7), Practical course, Internship					

<b>Module 5</b>	<b>Personalized Implantology</b> Personalisierte Implantologie	[Module Code]
<b>Usability of the module in other degree programs</b>	no	
<b>Other</b>	Seminar via e-learning (online seminar and MCQquestions) Hands-On Processing of case presentations based on Scientific literature	

<b>Module 6</b>	<b>Final module - examination area</b> Abschlussmodul - Prüfungsbereich					<i>Module code ]</i>
<b>Mandatory or elective module</b>	<b>Mandatory module</b>					
<b>Credit points (CP) and workload</b>	<b>20 (15+5) CP</b>					
<b>Module duration</b> (according to the study plan)	<b>1 semester</b>					
<b>Courses/ Forms of learning</b>	<b>Art</b>	<b>Standard semes</b> <b>at beginning of</b> <b>study WiSe</b>	<b>Mandatory/</b> <b>Elective</b>	<b>Contacttim</b> <b>(SWH)</b>	<b>Self-study</b>	<b>Credit</b> <b>points</b>
Master thesis		Semester 4	Mandatory			15
Final Oral Examination		Semester 4	Mandatory			5
<b>To be able to complete the module, apart from regular participation in the courses, the following achievements must be made:</b>						
Presence						
Active participation	according to § 5 para. 3					
Course achievement(s)	Presentation of the Master's thesis after formal registration (10 min. Oral presentations and Discussion)					
Module examination	Master's thesis and final oral examination					
<b>Qualification goals/learning outcomes/competences</b>						
With the final thesis, students demonstrate that they can work on a subject-relevant problem independently and within a specified period using scientific methods and present the results of their work in writing in an appropriate manner.						
<b>Contents</b>						
A demanding topic is worked on scientifically. The Master's thesis is to be written as an independent scientific paper within six months.						
<b>Recommended prerequisite(s) for the module or individual courses of the module</b>						
none						
<b>Access requirement(s)</b>			Completed modules 1-5			
<b>Language(s) of instruction and examination(s)</b>			German and English			
<b>Weight of the module grade in the overall grade</b>			20/60			
<b>Frequency of the offer</b>			Every semester			
<b>Reason for compulsory attendance</b>			According to the University Rules (HochschG) § 26 Abs. 2 (7), Practical course, Internship			
<b>Usability of the module in other degree programs</b>			no			
<b>Other</b>						

### Legend:

SWS = Semester hour per week

CP = Credit point

Prac = Internship

T in SG= Training in small groups

Sem = Seminar

MCQ = Multiple Choice Question

### Workplace-based examination formats:

DOPS = Direct Observation of Procedural Skills: the focus is on manual clinical skills and interventions.

Mini-CEX = Mini Clinical Evaluation Exercise: the focus is on communication and clinical examination