Module Descriptions

Module description Basic Theory 1

Module 1 / BT1	Basic Theory 1	Compulsory Module	10 CP (total.) = 300 h	
			Contact study 80 h in form of block sessions	Self study 220 h

Contents

The module teaches the current state of knowledge in the basics of oral implantology, especially in the areas of oral diagnostics and treatment planning, as well as technical and personnel requirements. In addition, the basics of independent scientific work are taught.

Learning Outcome / competence objectives

The students can independently plan simple implant-prosthetic therapies on the local bone. They know the identification fields, classifications and guidelines of oral diagnostics and implant logical therapy concepts. They can use the various diagnostic methods for recording the bone availability in a case-specific and differentiated manner as well as assess the mechanical load capacity of implants. They have the basic knowledge of modern hard and soft tissue management.

The students can independently select prosthetic components and restorative materials for specific patients. They can identify patient wishes and adapt their treatment planning depending on individual medical history, findings, age-specific aspects, tissue availability and aesthetic objectives.

The students have the fundamental knowledge of scientific work. They are proficient in researching sources and data and can critically analyse scientific methodology used in literature.

Requirements to participate in the module and individual sessions of the module

None

Recommended requirements

None

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usabilty of the module for other courses	-
Availability	Once per semester
Length of the module	One semester
Module coordinator	Dr. Paul Weigl
Proof of study/ or as exam preparation	
Proof of attendance	None
Proof of work	None
Teaching- / Learning formats	lecture, practice
Lesson- / examination language	English
Module examination	**Format / length / contents where applicable**
Final module examination consisting of :	Examination (graded) / Exam length: 60 min.
Cumulative Module examination consisting of:	
Establishing the module grade by cumulative module examinations:	

	Teaching format	Semester hours per week	CP	Semester			
				1	2	3	4

	Fundamentals of dental implantology	Lecture	2	3	x			
	Oral diagnostics and treatment planning	Lecture	2	3	x			
	Technical and personnel requirements	Lecture	2	2	x			
	Methodology scientific work	Lecture, Practice	2	2	x			
	Module examination	Examination	-	-	x			
	Total		**8**	**10**				

Module description Basic Theory 2

Module 2/ BT2	**Basic Theory 2**	**Compulsory module**	**10 CP (total.) = 300 h**	
			Contact study **80 h in form of block sessions**	**Self study** **220 h**

Contents

The module covers the current state of knowledge in oral implantology and builds on the basics of oral implantology. In particular, the areas of implant prosthetics, standard surgical procedures and basic prosthetic treatment steps are covered. In addition, in-depth basics for own scientific work are taught.

Learning outcomes / competence objectives

The students know the advantages and disadvantages of different implant systems and implant designs and can independently plan complex implant-prosthetic therapies on local bone.

They have a critical understanding of the surgical techniques and surgical procedures learned. They can select individual bone-specific techniques to optimally design the implant position of the person to be treated. You can implement advanced surgical and prosthetic treatment steps independently. They are proficient in software-based planning for navigated implant placement.

The students know complex prosthetic treatment procedures as well as the necessary cooperation with the dental laboratory. They have all the necessary skills in the selection, assembly and disassembly of prosthetic abutments. They know different types of fastening of fixed suprastructures (screwing, cementation, friction) and have a critical understanding of the advantages and disadvantages of the occlusion concepts they have learned. The students know the tasks, shaping and aftercare of the peri-implant soft tissue at the interface abutment and at the interface crown/bridge.

Students have the necessary knowledge to write their own scientific paper and are familiar with statistical principles and methods of analysis.

Requirements to participate in the module and individual sessions of the module

None

Recommended requirements

Module „Basic Theory 1“

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability	Once per semester
Length of module	One semester
Module coordinator	Dr. Paul Weigl
Proof of study/ or as exam preparation	
Proof of attendance	None
Proof of work	none
Teaching- / Learning formats	Lecture, practice
Lesson- / Examination language	English
Final module examination	**Format / length / contents where applicable**
Final module examination consisting of:	Examination (graded) / Exam length: 60 min.
Cumulative module examination consisting of:	
Establishing the module grade by cumulative module examinations	

		Lesson format	Semester hours per week	CP	Semester			
					1	2	3	4
	Implant systems	Lecture	2	2		x		
	Standard scientific procedures	Lecture, practice	2	3		x		
	Basic prosthetic treatment steps	Lecture	2	3		x		
	Methodology of scientific work II	Lecture, practice	2	2		x		
	Module examination	Examination	-	-		x		
	Total		**8**	**10**				

Module description Surgical techniques

Module 3/ CHT	Surgical techniques	Compulsory module	10 CP (total.) = 300 h	
			Contact study 80 h in form of block sessions	Self study 220 h

Contents

The module covers the current state of knowledge of sophisticated surgical techniques in oral implantology and critically reviews them. Special focus is placed on advanced surgical techniques as well as follow-up care and the management of complications.

Learning outcomes / competence objectives

Students can independently extract and interpret scientific, evidence-based surgical methodology in literature. The students are thus able to evaluate complex initial situations and select treatment therapies in a scientifically sound manner. The students plan demanding surgical interventions and implement them independently on the person to be treated.

Students have the competence to critically assess the surgical difficulty of different methods for improving the quality and quantity of the bone implant position and the peri-implant soft tissue.

Students can identify, analyse, and differentiate biological and technical complications in oral implantology. On this basis, they can implement efficient and promising oral surgical management of clinical failures (e.g. perforation of nerves, arteries and sinuses, peri-implantitis, explantation of implants, wound dehiscence, osteomeritis).

Requirements to participate in module and individual sessions of the module

Module "Basic Theory 1" and "Basic Theory 2"

Recommended requirements

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability of the module	Once per semester
Length of module	Two semesters
Module coordinator	Dr. Paul Weigl
Proof of study/ or as exam preparation	
Proof of attendance	none
Proof of work	none
Teaching- / Learning formats	Lecture, practice
Lesson- / Examination language	English
Module examination	**Format / length / contents where applicable**
Final module examination consisting of:	Examination (graded), Exam length: 60 min.
Cumulative module examination consisting of:	
Establishing the module grade by cumulative module examinations:	

	Lesson format	Semester hours per week	CP	Semester			
				1	2	3	4

	Advanced surgical techniques I	Lecture, practice	2	3			x	
	Advanced surgical techniques II	Lecture, practice	2	3			x	
	Advanced surgical techniques III	Lecture	2	2				x
	After care/ Management complications	Lecture	2	2				x
	Module examination	Examination	-	-				x
	Total		**8**	**10**				

Module description Implant prosthetics

Module 4 / IMP	Implant prosthetics	Compulsory module	10 CP (total) = 300 h	
			Contact study 80 h in form of block sessions	Self study 220 h

Contents

The module covers the current state of knowledge of complex prosthetic treatment regimes in oral implantology and critically reviews it. Special focus is placed on implant prosthetics (fixed and removable) as well as on follow-up care and the management of complications.

Learning outcomes / competence objectives

Students can independently extract and interpret scientific, evidence-based prosthetic methodology in the literature. The students are thus able to evaluate complex initial situations and select treatment therapies in a scientifically sound manner. The students plan sophisticated prosthetic therapies and implement them independently on the person to be treated. The students can recognise the influence of a vertical jaw relation that is too low or a malocclusion and independently pre-treat prosthetically. Furthermore, the students can provide the person to be treated with a prosthetic restoration immediately on insertion of primarily stable implants. In particular on traumatic tooth loss or after indicated tooth extraction, the students can apply this immediate restoration concept. They also have the competence to atraumatically shape peri-implant soft tissue with prosthetic components as well as to recognise material fatigue and technical failure of implant-abutment connections at an early stage and counteract them therapeutically.

Students can identify, analyse, and differentiate biological and technical complications in oral implantology. On this basis, they can implement efficient and promising prosthetic management of clinical failures (e.g. abutment fracture, screw fracture, documentation, chipping, CMD complaints on insertion of dentures, retention loss of dentures).

Requirements to participate in module and individual sessions of the module

Module „Basic Theory 1“ and „Basic Theory 2“

Recommended requirements

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability of the module	once per semester
Length of module	two semesters
Module coordinator	Dr. Paul Weigl
Proof of study/ or as exam preparation	
Proof of attendance	none
Proof of work	none
Teaching- / Learning formats	lecture
Lesson- / Examination language	English
Module examination	**Format / length / contents if appropriate**
Final module examination consisting of:	Examination (graded), Examination length: 60 min.
cumulative module consisting of:	
Establishing the module grade by cumulative module examinations:	

		Lesson format	Semester hours per week	CP	Semester			
					1	2	3	4
	Fixed implant prosthetics	Lecture	2	2			x	
	Removable implant prosthetics	Lecture	2	2			x	
	After care/ Management complications	Lecture	2	3				x
	Immediate prosthetic treatment	Lecture	2	3				x
	Module examination	Examination	-	-				x
	Total		**8**	**10**				

Module description Hospitation

Module 5/ HOS	Hospitation	Compulsory module	3 CP (total.) = 90 h	
			Contact study **30 h in form of block sessions**	**Self study** **60 h**

Contents

Students passively attend the patient treatment performed by the teachers. Teachers give detailed explanations of the individual treatment steps and answer students' questions. The case casuistry is additionally prepared and followed up in writing by the student to deepen the theoretical knowledge. The module takes place at the Centre for Dental, Oral and Maxillofacial Medicine (ZZMK) Frankfurt am Main or at an accredited teaching practice.

Learning outcomes / competence objectives

The students can analyse therapy plans and compare them with the demonstrated treatment steps. They can relate the importance of the individual work steps as well as the importance of the entire clinical workflow to each other and assess their significance for the therapy outcome.

Requirements to participate in module and individual sessions of the module

Module „Basic Theory 1“

Recommended requirements

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability of the module	Once per semester
Length of module	4 days (block session)
Module coordinator	Dr Nadine Countess of Krockow
Proof of study/ or as exam preparation	
Proof of attendance	none
Proof of work	Four treatment documents (ungraded)
Teaching- / Learning formats	Work experience
Lesson- / Examination language	English
Modul examination	**Format / length / contents if appropriate**
Final module examination consisting of :	-
Cumulative module examination consisting of:	
Establishing the module grade by cumulative module examinations:	

	Teaching format	Semester hours per week	CP	Semester			
				1	2	3	4
Hospitation	Practical	1	3	x			
Module examination		-	-	x			
Total		**1**	**3**				

Module Description Supervision

Module 6/ SUP	Supervision	Compulsory module	7 CP (total.) = 210 h	
			Contact study 24 h in form of block sessions	Self study 186 h

Contents

The module envisages the independent treatment of 3 patients, which is undertaken in the student's practice or clinic, in an accredited teaching practice or in the university clinic under on-site supervision and with professional and methodological guidance from a teacher or from an accredited tutor.

The requirements for carrying out surgical or prosthetic treatment steps on patients on one's own under the guidance (technical and methodical supervision) on site by a teacher or by a tutor authorised to conduct examinations are:

a) The submission of complete documentation regarding:

general medical history; findings; indication.

Information: risks, alternatives, costs

informed consent

clinical image documentation

- planning models (set-up, wax-up)

Case-specific X-ray findings

b) The submission of the planned surgical therapy concept

c) The submission of the planned final prosthetic treatment .The submission of a surgical guide template

d) Meeting the required hygiene standards in the student's practice or clinic.

e) The submission of the necessary surgical and prosthetic instruments if a surgical procedure is carried out on the patient.

f) Ensuring the involvement of a trained assistant (e.g. theatre nurse) if a surgical procedure is carried out on the patient.

Learning outcomes / competence objectives

Students can critically reflect on their independently developed therapy plans, their manual skills and their treatment workflow in their own working environment and consequently optimise them.

Participation requirements for the module or for individual courses of the module

Module "Hospitation"

Recommended requirements

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability of the module	Once per semester
Length of the module	One semester
Module coordinator	Dr Nadine Countess of Krockow
Proof of study/ or as exam preparation	

Proof of attendance	None
Proof of work	Two evidences of performance as per § 14 Para. 10
Teaching- / Learning formats	Practical experience
Lesson- / Examination language	English
Module examination	**Format / length / contents if appropriate**
Final module examination consisting of:	Practical examination (graded)
Cumulative module examination consisting of:	
Establishing the module grade by cumulative module examinations:	

	Teaching format	Semester hours per week	CP	Semester			
				1	2	3	4
Supervision	P	1	7			x	
Module examination		-	-			x	
Total		**1**	**7**				

Module description Patient treatment

Module 7/ PAT	Patient treatment	Compulsory Module	20 CP (total.) = 600 h		Study hours per week
			Contact study.	Self study 600 h	

Contents

The module requires 20 cases of performance of a complete treatment documentation of an independently performed surgical intervention and an independently performed prosthetic final fitting on one person to be treated in each case as well as the successful passing of an OSCE examination.

The following indications must be present as a minimum:

a) Standard surgical procedure with prosthetic single-tooth restoration in the aesthetic anterior region (2 cases)

b) Standard surgical procedure with fixed bridge restoration over 3-4 teeth (2 cases)

c) Standard surgical procedure with fixed bridge restoration or removable prosthesis in a severely reduced dentition or toothless jaw (4 cases)

d) Complex surgical treatment (e.g. external sinus lift, immediate implant placement, bone block surgery, soft tissue grafting) with prosthetic single-tooth restoration in the aesthetic anterior region (1 case)

e) Complex surgical treatment (e.g. external sinus lift, immediate implant placement, bone block surgery, soft tissue grafting) with fixed bridge over 3-4 teeth (1 case).

f) Complex surgical restoration (e.g. external sinus lift, immediate implant placement, bone block surgery, soft tissue grafting) with fixed bridge or removable prosthesis in a severely reduced dentition or toothless jaw (1 case).

g) Standard surgical intervention or complex surgical treatment (e.g. external sinus lift, immediate implant placement, bone block surgery, soft tissue grafting) with subsequent prosthetic restoration on the above indications (single tooth restoration, fixed bridge restoration over 3-4 teeth or fixed bridge restoration/removable prosthesis in a severely reduced dentition or toothless jaw) (9 cases)

In detail, the 20 cases of performance each include the following treatment documentation:

a) Planning:
- General medical history; findings; indication
- Clarification; risks, alternatives, costs
- Consent form
- Clinical image documentation
- Planning models (set-up, template)
- Case-specific X-ray findings

b) Surgical procedure:
- clinical image documentation
- Post-operative X-ray control
- OP records

c) Final prosthetic treatment:
- clinical image documentation
- X-ray controls

10 patient cases are freely selected by the students from the total of 20 patient cases and additionally checked on after 3 months. These 10 patient cases comprise the components of the treatment documentation a)-c) and additionally the documentation of the follow-up control after 3 months.

Learning outcomes / competence objectives

Students can document complex patient treatments based on scientific standards. They are proficient in dental photography of clinical therapy steps and can present their patient cases in a target group-oriented manner using the specialist vocabulary.

They have mastered advanced surgical and prosthetic treatment steps and are able to optimise their practical and manual skills independently. They have developed a critical and reflective professional competence.

Participation requirements for the module or for individual courses of the module

Module "Patient Treatment"	
Recommended requirements	

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability of the module	Once per semester
Length of the module	Two semesters
Module coordinator	Dr Nadine Countess of Krockow
Proof of study/ or as exam preparation	
Proof of attendance	None
Proof of work	Twenty patient case records
Teaching- / Learning formats	Practical experience
Lesson- / Examination language	English
Module examination	**Format / length / contents if appropriate**
Final module examination consisting of:	OSCE-Examination
Cumulative module examination consisting of:	
Establishing the module grade by cumulative module examinations:	

	Teaching format	Semester hours per week	CP	Semester			
				1	2	3	4
Patient treatment	Practical	0	20	x			
Module examination		-	-			x	
Total		**0**	**20**				

Module Description Master Thesis

Module 8/ MT	Master Thesis	Compulsory module	20 CP (total.) = 600 h	
			Contact study.	Self study 600 h

Contents

The Master thesis covers a topic from the field of oral implantology, which is developed independently by the student based on literature and according to scientific methodology. The Master thesis is presented within the framework of a final presentation (colloquium).

Learning outcomes / competence objectives

The students can methodically and scientifically reflect on a problem as well as write and present a clearly structured paper within a given time frame. They apply subject-specific skills, abilities, and techniques to formulate a scientific hypothesis and independently verify or falsify it according to scientifically approved methods. They can work on a subject or a question through a structured literature analysis and a scientific evaluation. They can present their results in a way that is appropriate for the target group using the specialist vocabulary

Participation requirements for the module or for individual courses of the module

Module „Basic Theory 1“

Recommended requirements

-

Allocation of the module (course / faculty)	**Oral Implantology / Faculty 16**
Usability of the module for other courses	-
Availability of the module	Once per semester
Length of module	One semester
Module coordinator	Dr Nadine Countess of Krockow
Proof of study/ or as exam preparation	
Proof of attendance	none
Proof of work	none
Teaching- / Learning formats	
Unterrichts- / Prüfungssprache	English or German
Module examination	**Format / length / contents if appropriate**
Final module examination consisting of:	Master thesis (=Final paper, graded) with colloquium (ungraded, passed)
Cumulative module examination consisting of:	
Establishing the module grade by cumulative module examinations:	

	LV-Form	SWS	CP	Semester			
				1	2	3	4
Master Thesis	-	0	19				x
Colloquium		1	1				x
Summe		**1**	**20**				