

Medical University of Vienna

Course catalogue

Information in English for incoming exchange students

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1 Preliminary note

This document provides an overview of the curriculum of the following degree programs offered at Medical University of Vienna:

- Medicine Degree Program (N202)
- Dentistry Degree Program (N203)
- Medical Informatics Master's Programme (N936)

Please note that the official and up-to-date course catalogue is currently available in German only (see links below). This document is intended to serve orientation purposes only. The information provided is nonbinding.

Incoming **medicine students** who have been accepted for a mobility program for studies currently can only choose between **course modules assigned to the 5th year** at Medical University of Vienna (semester 9 and 10, see details on page 10 and page 39 following).

Those subjects are listed here:

- Emergency Medicine / Intensive Care
- Neurology
- Pediatrics
- Psychiatry
- Ophthalmology / Otorhinolaryngology
- Gynecology / Obstetrics

For information on possible combinations of those subjects students concerned should refer to the brochure "Information for Incoming Students" linked on the following webpage:
<https://www.meduniwien.ac.at/web/en/international-affairs/student-staff-exchange/student-mobility/>.

Incoming exchange students planning to take courses from the **Dentistry Programme** or the **Medical Informatics Master's programme** are welcome to contact the International Office for information on how to choose their subjects.

Links to the official and up-to-date course catalogue (in German only):

- Medicine degree programme: <https://studyguide.meduniwien.ac.at/curriculum/n202-2020/?state=0-96163-5939/diplomstudium-humanmedizin>
- Dentistry degree programme: <https://studyguide.meduniwien.ac.at/curriculum/n203-2020/?state=0-97554-6227/diplomstudium-zahnmedizin>
- Medical Informatics Master's programme: <https://www.meduniwien.ac.at/web/studium-weiterbildung/masterstudium-medizinische-informatik/studienaufbau/>

2 MEDICINE DEGREE PROGRAMME (N202)

2.1 Overview

THE VIENNA MEDICAL CURRICULUM is based on the integration of theory and clinical practice. In each learning unit (**Module**), students learn about normal structure and function, as well as the most important and most common diseases and therapies.

In addition, there are courses called “**lines**” which take place through the whole of the semester. They connect module content with clinical work by focusing on clinical skills.

Problem based learning (PBL) and **case based learning (CBL)** supplement other instructional methods.

Phase three of the degree programme (semesters 9-12) focuses on intensive clinical training.

Different types of assessment are being used throughout the programme:

- **Continuous assessment in practical courses and seminars** (assessment based on ongoing written or oral contributions within the framework of the course). Some seminar courses follow a **team-based learning** format.
- **FIPs (FORMATIVE INTEGRATED EXAMINATIONS)** at the end of each winter semester: these multiple choice exams provide students with feedback on their learning performance.
- **SIPs (SUMMATIVE INTEGRATED EXAMINATIONS)** at the end of each academic year: multiple choice tests assessing students’ knowledge of course content from an entire academic year. This exam must be passed to receive ECTS credits for the courses taken during the respective academic year.

The duration of the Medicine degree programme is 12 semesters:

- **Phase I** lasts two semesters.

- **Phase II** lasts six semesters.
- **Phase III** lasts 4 semesters (including the 48-week Clinical Practical Year).

As a graduation requirement students have to write a diploma thesis. Modules 7, 17 and 24, and the Scientific Methods line course focus on academic skills and enable students to perform the research for their thesis.

In addition, students have to take a series of **clinical clerkships** for totalling 12 weeks.

Phase I (two semesters)				
Semester 1 (winter semester)				
Module	Code / Year	ECTS-Credits		
		Lecture	Practical Course/ Seminar	Total
Health and Illness	1DIPLMM1	4.7	1.6	6.3
The Human Body	1DIPLMM2	8.9	2.7	11.6
From Molecule to Cell	1DIPLMM3	9.0	2.5	11.5
Social Skills	1DIPLML1		2.6	2.6
First Aid	1DIPLML2		1.1	1.1
Problem based learning (PBL)	1DIPLMPOL		1.1	1.1
				34.2
Semester 2 (summer semester)				
Functional Systems and Biological Regulation	1DIPLMM4	6.5	3.3	9.8

Genetics, Molecular and Cellular Communication	1DIPLMM5	4.0	1.7	5.7
Environment, Family and Society	1DIPLMM6	4.8	1.2	6.0
Health Assessment	1DIPLML3		1.1	1.1
Problem based learning (PBL)	1DIPLMPOL		2.2	2.2
Optional subjects	1DIPLMOPT			1.0
				25.8
Total for the year				60
Phase II (four semesters)				
Semester 3 (winter semester)				
Science and Medicine (SSM I)	2DIPLMM7	1.4	4.1	5.5
Disease: Origins and Symptoms	2DIPLMM8	8	3	11
Disease, Manifestation and Perception, General Pharmacotherapy	2DIPLMM9	6.2	4.9	11.1
Medical Interview A	2DIPLML4A		1.0	1.0
Basic Medical Skills	2DIPLML5		1.0	1.0
Problem based learning (PBL)	2DIPLMPOL		2.1	2.1
Optional subjects	2DIPLMOPT3			2.0
				33.7
Semester 4 (summer semester)				

Endocrinology and Metabolism	2DIPLMM10	3.5	0.7	4.2
Cardiovascular System and Blood	2DIPLMM11	5.3	2.9	8.2
Respiratory System	2DIPLMM12	3.3	1.1	4.4
Physical Examination Techniques	2DIPLML6		1.0	1.0
Clerkship Preparation	2DIPLML7		1.0	1.0
Organ Morphology I	2DIPLML8A		3.3	3.3
Case Based Learning (CBL)	2DIPLMCBL		2.1	2.1
Optional subjects	2DIPLMOPT4			2.0
				26.3
Total for the year				60
Semester 5 (winter semester)				
Nutrition and Digestion	3DIPLMM13	3.7	1.6	5.3
The Kidneys and Homeostasis	3DIPLMM14	2.8	1.2	4.0
Sexuality, Reproduction, Pregnancy and Birth	3DIPLMM15	4.1	1.2	5.3
Infants, Childhood and Adolescence	3DIPLMM16	5.4	1.2	6.6
Case Based Learning (CBL)	3DIPLMCBL		1.9	1.9
Organ Morphology II	3DIPLML8B		3.6	3.6
Specific Examination Techniques I	3DIPLML9A		0.9	0.9

Resuscitation Techniques I	3DIPLML10A		0.9	0.9
Clerkship	3DIPLMCLS1			2.0
Optional subjects	3DIPLMOPT5			2.0
				32.5
Semester 6 (summer semester)				
Medical Research Methods - SSM2	3DIPLMM17	1.0	4.1	5.1
The Skin and Sensory Organs	3DIPLMM18	4.6	1.0	5.6
The Brain and Nervous System	3DIPLMM19	6.6	1.0	7.6
Neurological Status	3DIPLML11		0.9	0.9
Medical Interview B	3DIPLML4B		0.9	0.9
Organ Morphology III	3DIPLML8C		2.4	2.4
Clerkship	3DIPLMCLS2			2.0
Optional subjects	3DIPLMOPT6			3.0
				27.5
Total for the year				60
Semester 7 (winter semester)				
Module	Code / Year	ECTS-Credits		

		Lecture	Practical Course/ Seminar	Total
Public Health	4DIPLMM22/23	4.5	2	6.5
Locomotion, Performance and Pain	4DIPLMM21	4	0.6	4.6
Surgery	4DIPLMM25	5.3		5.3
Dermatology and STI	4DIPLMM26	1	3.7	4.7
Internal Medicine	4DIPLMM27		5	5
Specific Diagnostic Skills	4DIPLML12		0.9	0.9
Basics in Sonography	4DIPLML13		0.5	0.5
Specific Examination Techniques II	4DIPLML9B		0.9	0.9
Optional subjects	4DIPLMOPT7			3.0
Clerkship	4DIPLMCLS3			2.0
				33.4
Semester 8 (summer semester)				
Psychological Functions in Health and Disease, Medical Interview C	4DIPLMM20	4	2.5	6.5
Project Studies (SSM III)	4DIPLMM24	0.8	3.1	3.9
Integrated Clinical Practical Preparation	4DIPLML14		1.8	1.8
Specific Examination Techniques III	4DIPLML9C		0.9	0.9
Resuscitation Techniques II	4DIPLML10B		0.5	0.5

Clerkship	4 DIPLMCLS4			2.0
Optional subjects	4DIPLMOPT8			2.0
Diploma Thesis A	4DIPLMTHSA			9.0
				26.6
Total for the year				60

Phase III (six semesters)					
Semester 9 (winter semester)					
Module	Code / Year	ECTS-Credits			
		Lecture	Practical Course/ Seminar	Clinical Practical Course	Total
Neurology	5DIPLMNEUR	1.3	2.2	3.2	6.7
Psychiatry	5DIPLMPSYC	1.3	2.6	2.9	6.7
Paediatrics	5DIPLMPED	1.9	1.9	2.9	6.7
Interdisciplinary Case Conferences	5DIPLML15/17		4,3		4.3
Scientific Methods (SSM 4)	5DIPLML18		1.4		1.4
Semester 10 (summer semester)					
Gynaecology and Obstetrics	5DIPLMGYN		2.9	3.8	6.7
Ophthalmology	5DIPLMOPHT	1.0	1.0	1.9	3.8
Otolaryngology	5DIPLMORL	0.6	1.1	2.1	3.8

Emergency Medicine, Intensive Care	5DIPLMEMM	1.3	1.6	3.8	6.7
Diploma Thesis B	5DIPLMTHSB				9.0
Clerkship	5DIPLMCLS5				4.0
Total for the year					60
Semester 11 (winter semester) + Semester 12 (summer semester)					
Module	Code / Year	ECTS-Credits			
		Lecture	Practical Course/ Seminar	Clinical Practical Course	Total
Internal Medicine	6DIPLMINTM			19.7	19.7
Surgery and Preoperative Disciplines	6DIPLMSURG			19.7	19.7
Elective Discipline	6DIPLMELEC			19.7	19.7
Return Week	6DIPLML19		1.0		1.0
Total for the year					60

2.2 Course descriptions

2.2.1 Phase I (Semester 1 and 2)

The first phase of the degree program consists of the first two semesters.

MODULE 1 1DIPMM1

Health and Illness

Semester: 1

Lectures: 49 hrs; 4.7 ECTS credits

Practical course: 17 hrs; 1.6 ECTS credits

Total: 66 hrs; 6.3 ECTS credits

Exam: written; part of SIP1

Contents: Lectures and small group classes provide students with an initial introduction to the main topics of medical studies. Topics of general relevance (such as gender specific issues, medical ethics, medical law, proper conduct with patients, etc.) are explored in more detail and in closer relation to practice in structured classes. Students are also prepared for the main topics to be covered by other modules in the first year.

MODULE 2 1DIPMM2

THE HUMAN BODY

Semester: 1

Lectures: 86 hrs; 8,9 ECTS credits

Practical course: 34 hrs; 2.7 ECTS credits

Total: 120 hrs; 11.6 ECTS credits

Exam: written; part of SIP1

Contents: The course covers the morphology and physiology of all organ systems of both genders, focusing especially on the musculoskeletal system, circulatory system, respiratory system, digestive system, urogenital system, endocrine and nervous systems (lectures and practical courses). After an introductory seminar on the basics of medical imaging as well as physics and radiation protection, the contents of the course are also explored in the context of example clinical applications in radiological anatomy.

MODULE 3

1DIPLM3

FROM MOLECULE TO CELL

Semester: 1

Lectures: 94 hrs; 9.0 ECTS credits

Practical course: 26 hrs; 2.5 ECTS credits

Total: 120 hrs; 11.5 ECTS credits;

Exam: written; part of SIP1

Contents: After presentation of the physical chemical principles essential for a general understanding of modern cell biology, the course deals with the organisation of prokaryotes and eukaryotes, cellular compartments, cell organelles, metabolism, energy production, transport, homeostasis, signal transduction, cell dynamics, information, organisation of the nucleolus, cell division and cell death.

Basic knowledge is supplemented by examination of clinical studies to provide a general understanding of normal cell behaviour and pathomechanisms.

The practical provides an introduction to expert methodology and laboratory work. In the seminars fundamental concepts are discussed and applied using examples.

LINE 1

1DIPML1

SOCIAL SKILLS

Semester: 1

Practical course: 30 hrs; 2.6 ECTS credits

Total: 30 hrs; 2.6 ECTS credits

Exam: continuous assessment

Contents: This line course consists of an introductory seminar, a practical course and regular tutorials. Seminars cover the theoretical aspects of the topic. In the practical course students have direct contact with patients with care needs. Additionally, observations are reflected on and discussed in the weekly tutorial. The goal is to provide students with an appreciation of adequate communication, empathy and understanding when treating patients, as well as of professional behaviour in an interdisciplinary team. The course also aims to encourage critical reflection and an awareness of gender specific, social and cultural issues influencing health and disease.

LINE 2A

1DIPML2A

FIRST AID

Semester: 1

Practical course: 15 hrs; 1.1 ECTS credits

Total: 15 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: The goal of this practical course is to practice the skills required to give first aid efficiently and correctly according to general guidelines.

LINE PBL

1DIPOLPOL

PROBLEM BASED LEARNING

Semester: 1

Practical course: 15 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: The goal of this seminar course is to train students in the principles of problem based learning (PBL) and to illustrate this method by means of practical examples.

MODULE 4

1DIPOLM4

FUNCTIONAL SYSTEMS AND BIOLOGICAL REGULATION

Semester: 2

Lectures: 68 hrs; 6.5 ECTS credits

Practical course: 34 hrs; 3.3 ECTS credits

Total: 102 hrs; 9.8 ECTS credits

Exam: written; part of SIP1

Contents: The lecture course gives an overview of the functions of the nervous system, the inner organs, and the physiological and biochemical aspects of metabolism with regard to endocrine regulation. In the practical course, students learn methods for examination of basic body systems (respiration, circulatory system, muscular functions, balance, neural regulation) as well as basic blood work analysis.

MODULE 5

1DIPOLM5

GENETICS, MOLECULAR AND CELLULAR COMMUNICATION

Semester: 2

Lectures: 42 hrs; 4.0 ECTS credits

Practical course: 18 hrs; 1.7 ECTS credits

Total: 60 hrs; 5.7 ECTS credits

Exam: written; part of SIP1

Contents: In the lectures, seminars and the practical course the organisation of the human genome, including principles of inheritance, genetic expression, and the cell cycle are discussed. Students also learn fundamentals of genetic technology, as well as its application in diagnosis and therapy. Additionally, the medical ethics aspects of gene technology are discussed and molecular aspects of morphogenesis are introduced.

MODULE 6 1DIPLM6

THE HUMAN IN ENVIRONMENT, FAMILY AND SOCIETY

Semester: 2

Lectures: 50 hrs; 4.8 ECTS credits

Practical course: 12 hrs; 1.2 ECTS credits

Total: 62 hrs; 6 ECTS credits

Exam: written; part of SIP1

Contents: The lecture deals with the basics of external causes for diseases and aspects of evolutionary biology, psychology, sociology, ethics, gender specific issues and cultural issues influencing health and pathology; examines the healthy and pathological psyche with regard to disease, death, and dying with a focus on environment, such as working environment, including the basics of radiation protection and radiation biology, psycho-social impacts, the stages of life and family. Theory is applied in discussion and practice in small groups as well as in private study.

LINE 3 1DIPML3

HEALTH ASSESSMENT

Semester: 2

Practical course: 15 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: Students practice physical examination techniques on the healthy human as well as basic techniques of infection control and hygiene.

LINE PBL

1DIPOL

PROBLEM BASED LEARNING

Semester: 2

Practical course: 30 hrs; 2.2 ECTS credits

Exam: continuous assessment

Contents: The goal of this seminar course is to train students in the principles of problem based learning (PBL) and illustrate this method by means of practical examples.

2.2.2 Phase II (Semester 3 to 8)

During the six semesters of the second stage of study students have to attend compulsory courses amounting to 123.1 taught hours and optional subjects amounting to 8,7 taught hours. Modules comprise lectures, seminars and practical courses.

MODULE 7 2DIPLMM7

SPECIFIC STUDY MODULE 1 (SSM1): SCIENCE AND MEDICINE

Semester: 3

Lectures: 15 hrs; 1.4 ECTS credits

Practical course: 45 hrs; 4.1 ECTS credits

Total: 60 hrs; 5.5 ECTS credits

Exam: written exam and continuous assessment

Contents: Lectures cover the basics of medical research (structure, research methods) followed by an introduction to evidence based medicine (EBM). The practical course focuses on reviewing medical information and an introduction to computer based learning. The compulsory option provides a first experience of academic research work: each student has to conduct literature research, compile an annotated bibliography and write and present an abstract on a specific topic.

MODULE 8 2DIPLMM8

DISEASE: ORIGINS AND SYMPTOMS

Semester: 3

Lectures: 87 hrs; 8 ECTS credits

Practical course: 33 hrs; 3.0 ECTS credits

Total: 120 hrs; 11 ECTS credits;

Exam: written; part of SIP2

Contents: Lectures cover the fundamentals of patho-morphological responses (necrosis, inflammation, tumour), infectious disease, mechanisms of unspecific and specific (immune) defence, genetic and gender specific factors of pathogenesis, causes and mechanisms of canceration, pathogenetic mechanisms within the formation of vascular, clotting and degenerative diseases, basic neurobiology and psychosocial factors of pathogenesis. Practical courses and seminars illustrate content from the lecture topics and allow insight into the methods and importance of applied

diagnostic techniques. The patho-physiological principles of the development of clinical disease patterns are illustrated by means of prevalent and important examples.

MODULE 9 **2DIPLMM9**

MANIFESTATION AND PERCEPTION OF DISEASES, GENERAL PHARMACOTHERAPY

Semester: 3

Lectures: 67 hrs; 6.2 ECTS

Practical course: 53 hrs; 4.9 ECTS credits

Total: 120 hrs; 11.1 ECTS credits

Exam: written; part of SIP2

Contents: Within the scope of a lecture and a seminar series the somatic, psychological and gender specific causes and appearances of diseases are illustrated on the basis of prevalent, significant and typical patterns of disease. In addition, principles of general pharmacotherapy are introduced. The module also covers prevention, diagnosis and therapy of infectious diseases.

LINE 4A **2DIPLML4A**

MEDICAL INTERVIEW A

Semester: 3

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Contents: In this practical course students get to learn about and practise the fundamental general, medical, biographical, family history, psycho-social and gender specific aspects of medical interviews. Instruction takes place in small group classes. Students take their first medical interview with a patient, and acquire the principles of communicating competently with patients about diagnosis and treatment steps.

LINE 5 **2DIPLML5**

BASIC MEDICAL SKILLS

Semester: 3

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Contents: This practical course provides standardised training for clinical competence in basic medical skills (e.g. taking blood samples, inserting a urinary catheter, etc.), as well as in hygienic behaviour and skills (hand hygiene, non-touch technique, etc.). The contents are taught and practised in small group classes using simulation models.

LINE PBL

2DIPLMPOL

PROBLEM BASED LEARNING

Semester: 3

Practical course: 30 hrs; 2.1 ECTS credits

Exam: continuous assessment

Contents: The goal of this seminar course is to train students in the principles of problem based learning (PBL) and illustrate this method by means of practical examples.

MODULE 10

2DIPLMM10

ENDOCRINOLOGY AND METABOLISM

Semester: 4

Lectures: 38 hrs; 3.5 ECTS credits

Practical course: 8 hrs; 0.7 ECTS credits

Total: 46 hrs; 4.2 ECTS credits

Exam: written; part of SIP2

Contents: Lectures introduce anatomical, histological, physiological and biochemical basics, before discussing prevalent diseases of the endocrine organs, disorders of the carbohydrate, protein and lipid metabolism and diagnostic and therapeutic measures. Seminars explore the contents of the lecture programme in greater detail.

MODULE 11

2DIPLMM11

CARDIOVASCULAR SYSTEM AND BLOOD

Semester: 4

Lectures: 58 hrs; 5.3 ECTS credits

Practical course: 32 hrs; 2.9 ECTS credits

Total: 90 hrs; 8.2 ECTS credits

Exam: written; part of SIP2

Contents: In the first part of the lecture series students are provided with basic knowledge about the constitution, function and development of the cardiovascular and the haematopoietic systems in connection with clinical problems and taking account of gender specific aspects. The second part introduces cardiovascular and blood diseases, covering pathology and clinical evidence, diagnosis, therapy, prevention and rehabilitation. Practical classes consist of medical chemistry and physics exercises as well as an ECG course. Seminars address pharmacology and pharmacotherapy of cardiovascular and blood diseases.

MODULE 12 **2DIPLMM12**

RESPIRATORY SYSTEM

Semester: 4

Lectures: 36 hrs; 3.3 ECTS credits

Practical course: 12 hrs; 1.1 ECTS credits

Total: 48 hrs; 4.4 ECTS credits

Exam: written; part of SIP2

Contents: Lectures are aimed at consolidating knowledge of respiratory tract physiological and pathophysiological fundamentals, taking into account gender specific aspects, and cover the most prevalent diseases of the upper and the lower respiratory tracts, their pathogenesis (including psychosomatic causes) and diagnosis, and treatment options.

The interdisciplinary lecture programme also includes physiology, anatomy, physics, histology, pneumology, anaesthesiology, cardiothoracic surgery, radiology and paediatrics. In the seminars and the practical courses students investigate relevant disease patterns of the respiratory tract from an interdisciplinary perspective.

LINE 6 **2DIPLML6**

PHYSICAL EXAMINATION TECHNIQUES

Semester: 4

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Contents: In this practical course students are trained in the physical examination of women and men in order to determine the general status of a patient's health. Basic hygiene guidelines and behaviour are included.

LINE 7**2DIPLML7****CLERKSHIP PREPARATION**

Semester: 4

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Total: 15 hrs; 1.0ECTS credits

Contents: The goal of this practical course is to consolidate the contents of the semester 3 and 4 line courses (Basic Medical Skills, Medical Interview A + B, Physical Examination Techniques), and assessment of the skills acquired. The course prepares students for a clerkship.

LINE 8A**2DIPLML8A****ORGAN MORPHOLOGY I**

Practical course: 48 hrs; 3.3ECTS credits

Total: 48 hrs; 3.3 ECTS credits

Exam: continuous assessment

Contents: In a series of classes spanning material from various modules, and featuring continuous assessment, students conduct anatomical dissection exercises and combine their findings with diagnostic imaging techniques (including radiation protection), in order to gain an understanding of interpreting anatomical circumstances in a clinical diagnosis context. Students also acquire knowledge of topography relevant to the execution of surgical interventions. After an introductory phase, in the dissection exercises special emphasis is placed on the organ systems covered in the parallel modules (10-12).

LINE CBL**2DIPLMCBL****CASE BASED LEARNING**

Semester: 4

Practical course: 30 hrs; 2.1 ECTS credits

Contents: The goal of this course is to train students to record and successfully handle clinical case histories. Contents are based on the modules held parallel to the respective CBL class. This allows knowledge gained to be deepened with the help of practical case studies. Students practise making a diagnosis and treatment principles. The interactive course is held by clinicians from the respective clinical fields. Students are introduced to clinical thinking and work. Gender specific aspects are taken into account in the selection of case studies.

MODULE 13

3DIPMM13

NUTRITION AND DIGESTION

Semester: 5

Lectures: 45 hrs; 3.7 ECTS credits

Practical course: 19 hrs; 1.6 ECTS credits

Total: 64 hrs; 5.3 ECTS credits

Exam: written; part of SIP3

Contents: Lectures cover the anatomy, histology, physiology and pathology of the gastrointestinal tract including oropharyngeal, oesophageal, gastric, intestinal, hepatic, and pancreatic disorders and diseases. Causes and consequences of nutritional disturbances are discussed, as well as treatment measures. The seminars and practical courses serve to consolidate aspects of important and common diseases of the gastrointestinal tract and dietetics as covered in lectures – with special regard to gastrointestinal diseases (diarrhoea, constipation, inflammatory disorders), psychosomatic disorders, the impact of nutrition on health and on the course of disease, and nutritional disorders as causes of disease. In addition, key diagnostic and therapeutic interventions (e.g. endoscopic techniques) are introduced.

MODULE 14

3DIPMM14

THE KIDNEYS AND HOMEOSTASIS

Semester: 5

Lectures: 34 hrs; 2.8 ECTS credits

Practical course: 14 hrs; 1.2 ECTS credits

Total: 48 hrs; 4.0 ECTS credits

Exam: written; part of SIP3

Contents: In the lectures and the practical course students learn about the development, anatomy, function and common disorders of the kidney and the urinary tract drainage system, as well as the role of the kidney in electrolyte imbalances and disorders of the acid-base balance, including consideration of gender specific and psychosocial aspects.

Additionally, the consequences of renal function disorders on metabolism in the body are discussed.

MODULE 15

3DIPMM15

SEXUALITY, REPRODUCTION, PREGNANCY AND BIRTH

Semester: 5

Lectures: 50 hrs; 4.1 ECTS credits

Practical course: 14 hrs; 1.2 ECTS credits

Total: 64 hrs; 5.3 ECTS credits

Exam: written; part of SIP3

Contents: Lectures introduce the anatomical, histological, physiological, and biochemical basics of reproduction, while seminars address sexuality, ethics, psychosocial and forensic medical issues. In practical classes, pregnancy and birth problems are introduced and discussed in small groups.

MODULE 16 3DIPLMM16

INFANTS, CHILDHOOD AND ADOLESCENCE

Semester: 5

Lectures: 65 hrs; 5.4 ECTS credits

Practical course: 15 hrs; 1.2 ECTS credits

Total: 80 hrs; 6.6 ECTS credits

Exam: written; part of SIP3

Contents: Lectures cover with the characteristics of paediatric diseases during childhood and adolescence including physiological, biochemical, morphological, genetic, patho-physiological, psychosocial, and gender specific aspects. These fundamentals are discussed in more detail by means of representative examples taken from sub-specialisms in paediatrics.

LINE 8B 3DIPLML8A

ORGAN MORPHOLOGY II

Practical course: 58 hrs; 3.6 ECTS credits

Total: 58 hrs; 3.6 ECTS credits

Exam: continuous assessment

Contents: The range of module-overlapping lectures with continuous assessment aims to establish of a connection to the interpretation of anatomic conditions in a clinical-diagnostic context by means of practical dissection on a body in integration with diagnostic imaging techniques and radiation protection as well as at an understanding of clinically relevant topographic relations to the execution of surgical interventions.

After an introductory stage during the dissection process reference is also made to the organ systems which are dealt with in the parallel modules 13-15 and as well to the anatomical basics for the modules 19 and 21.

LINE 9A 3DIPLML9A

SPECIFIC EXAMINATION TECHNIQUES I

Semester: 5

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits

Exam: continuous assessment

Contents: In this practical course students acquire clinical skills and examination techniques with reference to the Competence Level Catalogue for Medical Skills.

LINE 10A 3DIPLML10A

RESUSCITATION TECHNIQUES I

Semester: 5

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits

Exam: continuous assessment

Contents: In this practical course – which builds on the First Aid course taken during Phase I – students practise enhanced resuscitation techniques and emergency care on dummies in small groups.

LINE CBL 3DIPLMCBL

CASE BASED LEARNING

Semester: 5

Practical course: 30 hrs; 1.9 ECTS credits

Contents: The goal of this course is to train students to record and successfully handle clinical case histories. Contents are based on the modules held parallel to the respective CBL class. This allows knowledge gained to be deepened with the help of practical case studies. Students are trained in and practise making a diagnosis and recommending treatment strategies. The interactive course is held by clinicians from the respective clinical field. Students are introduced to clinical thinking and work. Gender specific aspects are taken into account in the selection of case studies.

MODULE 17 3DIPLMM17

SPECIFIC STUDY MODULE 2 (SSM2):

MEDICAL RESEARCH METHODS

Semester: 6

Lectures: 12 hrs; 1 credit

Practical course: 50 hrs; 4.2 ECTS credits

Total: 62 hrs; 5.2 ECTS credits

Exam: written and continuous assessment

Contents: The course consists of a compulsory and an option element. The compulsory part comprises a lecture and a seminar programme which covers fundamentals of statistics for planning scientific studies and evaluating projects; the roles of random fluctuation, measuring errors and biological variability are also considered. Applicable international standards are addressed. In the small group classes (practical courses and seminars) for their option, students become acquainted with individual techniques of scientific work (laboratory, social science/psychology measurement methods).

MODULE 18 3DIPMM18

THE SKIN AND SENSORY ORGANS

Semester: 6

Lectures: 56 hrs; 4.6 ECTS credits

Practical course: 12 hrs; 1 ECTS credits

Total: 68 hrs; 5.6 ECTS credits

Exam: written; part of SIP3

Contents: Comprises a lecture series and a practical course which introduce anatomical, physiological and patho-physiological fundamentals of the skin and sensory organs, based on consideration of prevalent diseases.

MODULE 19 3DIPMM19

THE BRAIN AND NERVOUS SYSTEM

Semester: 6

Lectures: 81 hrs; 6.6 ECTS credits

Practical course: 12 hrs; 1.0 ECTS credits

Total: 93 hrs; 7.6 ECTS credits

Exam: written; part of SIP3

Contents: Lectures cover the physiological and pathological aspects of the functions of the nervous system, as well as neurological symptoms and syndromes. Topics are demonstrated and interactively discussed in small groups in the practical course and the seminars.

LINE 11 3DIPLML11

NEUROLOGICAL STATUS

Semester: 6

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits

Exam: continuous assessment

Contents: In this practical course students acquire neurological examination techniques and practise determination of neurological status.

LINE 4B 3DIPLML4B

MEDICAL INTERVIEW B

Semester: 6

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits

Exam: continuous assessment

Contents: Skills introduced in Medical Interview A are practised and further developed in small groups.

LINE 8C 3DIPLML8C

ORGAN MORPHOLOGY III

Practical course: 38 hrs; 2,4 ECTS credits

Total: 38 hrs; 2,4 ECTS credits

Exam: continuous assessment

Contents:

This range of module-overlapping lectures with continuous assessment aims at the establishment of a connection to the interpretation of anatomic conditions in a clinical-diagnostic context by means of practical dissection on a body in integration with diagnostic imaging techniques and radiation protection as well as at an understanding of clinically relevant topographic relations to the execution of surgical interventions.

After an introductory stage during the dissection process reference is also made to the anatomical basics of the organ systems which are dealt with in the modules 18, 19 and 21.

MODULE 22/23 **4DIPLMM22/3**

PUBLIC HEALTH

Semester: 7

Lectures: 68 hrs; 4.5 ECTS credits

Practical course: 32 hrs; 2 ECTS credits

Total: 100 hrs; 6.5 ECTS credits

Exam: written; part of SIP4a

This module introduces the basics of health care systems research, medical care research, health economics, insurance medicine, and quality assurance within health care systems in lectures, while understanding of application is developed in seminars with special regard to error management and efficient medical care. Further lectures address medical law and medical ethics as well as ethics in health care systems, and a seminar covers ethical medical conduct. The topic of preventive medicine is also explored, with lectures on the basics of preventive medicine, occupational medicine, environmental medicine and rehabilitation, and seminars and practical courses that deepen students' understanding, with special emphasis on lifestyle medicine, the biopsychosocial approach to prevention, methods of environmental medicine and immunisation policies in the health care system. Students take an occupational and workplace related history as well as a travel medical history, in fulfilment of the competence level catalogue. Lectures on geriatrics, another focus of the module, discuss the key physiological features of old age, geriatric symptoms and geriatric syndromes; the various dimensions of geriatric assessment (according to the competence level catalogue) are practised in seminars. Clinical, ethical, legal, preventive and rehabilitation topics as well as topics relating to health care provision are also covered.

MODULE 21 **4DIPLMM21**

LOCOMOTION, PERFORMANCE AND PAIN

Semester: 7

Lectures: 60 hrs; 4 ECTS credits

Practical course: 8 hrs; 0.6 ECTS credits

Total: 68 hrs; 4.6 ECTS credits;

Exam: written; part of SIP4a

Contents: Students learn about the specific, normal and pathological processes of the musculoskeletal system in respect of biomechanics, anatomy, physiology and gender specifics, as well as about the principles of physiology performance and training theory.

The course covers physiological stress and the resilience of the musculoskeletal system, including resultant degenerative diseases as well as soft tissue and bone injuries, tumours, vascular bone diseases, rheumatic systemic diseases, metabolic osteopathy and infections, and inflammation.. In addition to diagnosis and therapy, the principles of the occurrence of pain and its treatment are also presented, as well as psychological, social and gender specific aspects including principles of rehabilitation.

Two-thirds of the teaching takes place in the form of lectures, the remaining part in seminars and practical courses. Directed self study with the help of digital tuition materials rounds out the course.

MODULE 25 **4DIPLMM25**

SURGERY

Semester: 7

Lectures: 80 hrs; 5.3 ECTS credits

Total: 80 hrs; 5.3 ECTS credits

Exam: written; part of SIP4a

The module presents a systematic overview of principles of treatment in different surgical disciplines and demonstrates them with the help of practical case studies. The goals are to enable students to correctly identify and interpret clinical evidence of diseases that can be treated by surgery, to make a correct diagnosis and a differential diagnosis and suggest suitable treatment. Students further develop these skills through self study using the references and summaries provided.

MODULE 26 **4DIPLMM26**

DERMATOLOGY AND STI

Semester: 7

Lectures: 15 hrs; 1 ECTS credits

Practical course: 55 hrs; 3.7 ECTS credits

Total: 70 hrs; 4.7 ECTS credits

Exam: written; part of SIP4a

In this course students learn about dermatological and sexually transmitted infection (STI) disease patterns as relevant in clinical practice. Lectures introduce the classification of dermatological and sexually transmitted diseases, their epidemiology and the pathogenetic aspects of prevalent disease patterns. An interactive clinic presents real patient cases using digital media. The module also covers diagnostic procedures and differential diagnosis, and students learn about evidence based therapy options. Students actively take part in diagnosis and development of therapies by means of interactive methods. The dynamics of skin diseases are demonstrated on the basis of the development of disease patterns presented over several days. Seminars address practical aspects of the discipline in detail, and students use digital media to document dermatological and STI examinations and interventions. The seminars are accompanied by interactive test procedures serving as wrap-ups of the learning contents. Students also learn about prevalent disease patterns through self study of cases provided in electronic format.

MODULE 27 **4DIPLMM27**

INTERNAL MEDICINE

Semester: 7

Practical course: 75 hrs; 5 ECTS credits

Total: 75 hrs; 5 ECTS credits

Exam: written; part of SIP4a

This module covers manifestation, diagnosis and therapy of prevalent disease patterns and symptoms in internal medicine, as well as the ability to present patient cases and demonstrate the required diagnostic and therapeutic procedures.

MODULE 20 **4DIPLMM20**

PSYCHOLOGICAL FUNCTIONS IN HEALTH AND DISEASE

Semester: 7

Lectures: 62 hrs; 4 ECTS credits

Practical course: 38 hrs; 2.5 ECTS credits

Total: 100 hrs; 6.5 ECTS credits

Exam: written; part of SIP4a

Contents: Lectures present the principles of evaluating normal and abnormal psychological functions as well as the continuity from normality to pathology. For this purpose the key schools of psychological thought are introduced and the significance of genetic, biological, gender specific and social factors (including social-cultural contexts) are discussed. The principles of psychopathological diagnostics are

also presented. In the seminars, students are provided with psychiatric diagnostic schemas and the basic principles of exploration methods. With the help of case histories (audio and video presentations), students practice assessing the (affective) involvement of patients.

The basics of therapeutic principles in pharmacotherapy, psychotherapy and social therapy are taught in small groups. In the practical classes, students systematically practice specific communication and reflection skills in relation to epidemiologically important diseases.

MODULE 24

4DIPLMM24

SPECIFIC STUDY MODULE 3 (SSM 3):

PROJECT STUDIES

Semester: 8

Lectures: 12 hrs; 0.8 ECTS credits

Practical course: 66 hrs; 3.1 ECTS credits

Exam: written and continuous assessment

Total: 78 hrs; 3.9 ECTS credits

Contents: The module consists of compulsory element and a compulsory option. The compulsory content, Medical Science Research Method, comprises lectures and practical classes, and introduces medical informatics, evidence based medicine, quality assurance and data protection as well as biosignal recording, data processing, and composition and presentation of scientific studies. The compulsory Study Project comprises a practical in which students address the problematic of a selected topic, and the completion of a scientific study including gathering, analysis, interpretation and discussion of data. Finally, the student presents his/her project either in the form of a poster presentation or a short lecture.

LINE 12**4DIPLML12****SPECIFIC DIAGNOSTIC SKILLS**

Semester: 7

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits

Exam: continuous assessment

Contents: Students further develop their skills in relation to laboratory medicine, radiology, nuclear medicine, clinical pathology, microbiology, virology, and blood group serology, which are prerequisites for practical clinical experience in Phase III of the degree programme. In addition to identifying indications, students learn the principles of instrumental diagnostics and preparing clinical diagnoses on the basis of standard combinations of diagnostic results, such as diagnostic imaging, with special regard to radiation protection

LINE 9B**4DIPLML9B****SPECIFIC EXAMINATION TECHNIQUES II**

Semester: 7

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits

Exam: continuous assessment

Contents: In this practical course students acquire clinical skills and examination techniques with reference to the Competence Level Catalogue for Medical Skills.

LINE 13**4DIPLML15****BASICS IN SONOGRAPHY**

Semester: 7

Practical course: 7 hrs; 0.5 ECTS credits

Total: 7 hrs; 0.5 ECTS credits;

Exam: continuous assessment

Contents: In this course students learn to determine the most important indications in the context of other imaging procedures, as well as learning the basics of examination techniques and basic symptoms that can be identified using ultrasound diagnosis in the context of normal anatomy. Classes are based on case studies and practical exercises with the help of standard image documentation

equipment. The aim of the practical is to learn standard utilisation of this diagnosis method. It includes training in the formulation of clinical questions within the scope of interdisciplinary cooperation, training in anatomical spatial awareness, understanding the interaction between sound waves and tissue, and estimation of students' own practical abilities in examination techniques.

LINE 9C

4DIPLML11C

SPECIFIC EXAMINATION TECHNIQUES III

Semester: 8

Practical course: 15 hrs; 0.9 ECTS credits

Total: 15 hrs; 0.9 ECTS credits;

Exam: continuous assessment

Contents: In this practical course students acquire clinical skills and examination techniques with reference to the Competence Level Catalogue for Medical Skills.

LINE 10B

4DIPLML10B

RESUSCITATION TECHNIQUES II

Semester: 8

Practical course: 7 hrs; 0.5 ECTS credits

Total: 7 hrs; 0.5 ECTS credits;

Exam: continuous assessment

Contents: The basic skills as acquired in the semester 5 line course are further developed in a training area set up for this purpose and in a practical.

LINE 14

4DIPLML14

INTEGRATED CLINICAL PRACTICAL PREPARATION

Semester: 8

Practical course: 30 hrs; 1.8 ECTS credits

Total: 30 hrs; 1.8 ECTS credits;

Contents: In this practical course, clinical abilities and skills in communication, diagnosis, therapy, reflection and patient management are practised and examined as a conclusion to the practical courses in phases I and II of the degree programme. Learning targets are adjusted to the content of prior

content-related courses. The line course serves as preparation for the clinical practice placements in Phase III.

2.2.3 Phase III (semester 9 to 12)

The third phase of the degree programme is divided into placements.

One placement takes a third of one 15-week.

5DIPLMEMM

EMERGENCY MEDICINE AND INTENSIVE CARE

Semester: 9 or 10

Weeks: 5

Lectures: 20 hrs; 1.3 ECTS credits

Practical course: 25 hrs; 1.6 ECTS credits

Clinical practical: 60 hrs; 3.8 ECTS credits

Total: 105 hrs; 6.7 ECTS credits

Exam: written; part of SIP5a

Contents: The clinical practice course in emergency and intensive care management is made up of instructed classes at one of the departments of Emergency Medicine & Intensive Care at Vienna General Hospital. Lectures cover relevant issues of emergency and intensive care. In the practical classes, students systemically practise manual skills in emergency and intensive medicine.

5DIPLML15/17

Interdisciplinary Case Conferences

Semester: 9+10

Practical course: 90 hrs, 4.3 ECTS credits

Total: 90 hrs, 4.3 ECTS credits

Exam: continuous assessment

Contents:

The Seminar deals with typical disease patterns, complexes of symptoms, and professional issues from the fields of curriculum elements which have already been addressed in earlier semesters. The line course "Interdisciplinary Case Conferences" consists of the components:

- Grand Rounds; deal with topics from internal medicine, surgery, dermatology and the fields of the 5th year curricular courses.
- Clinical Diagnostics (Diagnostic Rounds): address professional questions in areas of clinical diagnostics such as laboratory medicine, radiology, nuclear medicine, clinical pathology, microbiology and virology.— in diagnostic imaging, special regard is given to radiation protection.
- Interdisciplinary Patient Management: deals with issues from the fields of public health, ethics in medicine, geriatrics, forensic medicine, medical law, hospital hygiene, palliative medicine, physical medicine, psychosomatics, oncology and radiation therapy (radiation oncology) and general medicine.

LINE 18 5DIPLML18

SCIENTIFIC METHODS (SSM 4)

Semester: 9

Weeks: 5

Seminars: 30 hrs; 1.4 ECTS credits

Total: 30 hrs; 1.4 ECTS credits

Exam: continuous assessment

Within this module students take two elective subjects, providing them with methods to apply in developing their diploma thesis (dissertation).

5DIPLMNEUR

NEUROLOGY

Semester: 9 or 10

Weeks: 5

Lectures: 20 hrs; 1.3 ECTS credits

Practical course: 35 hrs; 2.2 ECTS credits

Clinical practical: 50 hrs; 3.2 ECTS credits

Total: 105 hrs; 6.7 ECTS credits

Exam: written; part of SIP5a

Contents: Students learn about specific neurological disease patterns in lectures and seminars. Basic understanding, as acquired in Module 20, is built upon with more detailed knowledge of neurological disease patterns and their aetiology, pathogenesis, and therapy. In practical classes, students practise the knowledge and skills acquired in the Neurological Status line course (semester 6) in greater depth, as well as establishing clinical history taking account of neurological aspects. In the course of the clinical

practical students learn to apply their clinical knowledge and clinical skills through direct contact with patients. Active involvement in the wards and clinics of the University Department for Neurology – and corresponding clinical departments as approved by the University – provides students with an overview of neurological diagnostic and therapeutic methods.

5DIPLMPSYC

PSYCHIATRY

Semester: 9 or 10

Weeks: 5

Lectures: 20 hrs; 1.3 ECTS credits

Practical course: 40 hrs; 2.6 ECTS credits

Clinical practical: 45 hrs; 2.9 ECTS credits

Total: 105 hrs; 6.7 ECTS credits

Exam: written; part of SIP5a

Contents: The lecture series systematically provides students with a basic knowledge of psychiatry. Students learn about psychiatric examinations, the basics of disease patterns and their aetiology and pathogenesis, as well as about therapy and selected special subjects of psychiatry. In seminars, students learn about important specific psychiatric disorder patterns. In the practical course, students acquire knowledge and skills for the management of relevant psychiatric problems. The skills and knowledge included in the clinical practical are essential as professional preparatory training. Patterns of mental disorders, contact with psychiatric patients and psychiatric therapy are introduced. Additionally, students also get to know various institutions approved by the University.

5DIPLMPED

PAEDIATRICS

Semester: 9 or 10

Weeks: 5

Lectures: 30 hrs; 1.9 ECTS credits

Practical course: 30 hrs; 1.9 ECTS credits

Clinical practical: 45 hrs; 2.9 ECTS credits

Total: 105 hrs; 6.7 ECTS credits

Exam: written; part of SIP5a

Contents: In the clinical practical students are provided with the basic clinical skills of paediatrics at sections and clinics of the University Department of Paediatrics and Adolescent Medicine as well as at other departments approved by the University. In direct contact with patients, students learn how to establish a paediatric clinical history, with special regard to indirect history (discussion of history with parents), and determination of the general status of a patient's health. Moreover, the students become familiar with methods of diagnosis and therapy by active involvement in routine operations. In the lectures, students learn about diagnosis and therapy of prevalent, important and typical disease patterns at different stages of life. In the seminars, specific paediatric problems are discussed in small groups.

5DIPLMGYN

GYNAECOLOGY AND OBSTETRICS

Semester: 9 or 10

Weeks: 5

Practical course: 45 hrs; 2.9 ECTS credits

Clinical practical: 60 hrs; 3.8 ECTS credits

Total: 105 hrs; 6.7 ECTS credits

Exam: written; part of SIP5a

Contents: In the clinical practical students learn basic clinical skills in gynaecology and obstetrics in clinical sections and at the outpatient clinic of the University Department of Gynaecology and Obstetrics, as well as at other clinical departments approved by the University. Gynaecological patient history and the determination of general gynaecological health are practised in direct patient contact. Moreover, the students become familiar with methods of diagnosis and therapy through active involvement in routine operations. In the seminars, students learn about diagnosis and therapy of prevalent life-threatening gynaecological disorders, prenatal diagnostics and pregnancy precautions, and normal and abnormal delivery.

OPHTALMOLOGY & OTOLARYNGOLOGY

5DIPLMOPH

OPHTALMOLOGY

Semester: 9 or 10

Weeks: 2.5

Lectures: 15 hrs; 1 ECTS credits

Practical course: 15 hrs; 1 ECTS credits

Clinical practical: 30 hrs; 1.9 ECTS credits

Total: 60 hrs; 3.8 ECTS credits

Exam: written; part of SIP5a

Contents: In seminars and the lectures students acquire clinical knowledge of therapy and diagnosis methods in ophthalmology, and of differential diagnosis of prevalent, pressing and typical ophthalmological diseases. They also learn about management of emergency cases. In the clinical practical, students practise obtaining ophthalmological patient history, and examination of the eye, through direct patient contact at sections and clinics of the University Department of Ophthalmology as well as at other clinical departments approved by the University.

5DIPLMORL OTOLARYNGOLOGY

Semester: 9 or 10

Weeks: 2.5

Lectures: 9 hrs; 0.6 ECTS credits

Practical course: 18 hrs; 1,1 ECTS credits

Clinical practical: 33 hrs; 2.1 ECTS credits

Total: 60 hrs; 3.8 ECTS credits

Exam: written; part of SIP5a

Contents: Lectures for this placement discuss specific disorders, differential diagnoses including their basic pathomorphological and psychological aspects, as well as their prevention and therapy. In the practical students acquire the skills required for determining a patient's ear, nose and throat health. Functional testing is practised in seminars. The clinical practical consists of direct patient contact.

6DIPLMINTM

INTERNAL MEDICINE

Semester: 11 or 12

Weeks: 16

Clinical practical: 19.7 ECTS credits

Total: 19.7 ECTS credits

6DIPLMSURG

SURGERY AND PREOPERATIVE DISCIPLINES

Semester: 11 or 12

Weeks: 16

Clinical practical: 19.7 ECTS credits

Total: 19.7 ECTS credits

6DIPLMELEC

ELECTIVE DISCIPLINE

Semester: 11 or 12

Weeks: 8 + 8

Clinical practical: 9.85 + 9.85 ECTS credits

Total: 9.85 + 9.85 ECTS credits

6DIPLML19

RETURN WEEK

Semester: 12

Practical course: 15 hrs; 1 ECTS credits

Total: 15 hrs; 1 ECTS credits

CLERKSHIP

As part of a medical education, 12 weeks of clinical clerkship must be completed, unless otherwise specified in the articles of the University.

A clinical clerkship must have a minimum duration of two weeks. A minimum of four weeks must be completed at an Internal Medicine clinical section. Four further weeks have to be fulfilled at a primary care institution (studying approved practices for general medicine). For the remaining 4 weeks of obligatory clerkship, students have a free choice to attend clerkships in two disciplines for two weeks each, or a four-week clerkship in one discipline; however, it is strongly recommended that a clerkship at a surgical department is included.

The clinical clerkship can only be acknowledged if it qualifies as a structured clerkship, meaning that it is served at institutions following the regulations approved by the curriculum committee.

Furthermore, students must maintain a clinical logbook, documenting activities including time, place, tutor, progression and acquired skills and knowledge.

Equivalence Table

Subject		Curriculum N202
Medical Psychology		Module 1
Functional Pathology		Module 5
Functional Pathology and General Pathology		Module 8
Functional Pathology and General Pathology, Pharmacology and Toxicology, Hygiene and Microbiology, preventive medicine		Module 9
Anatomy and Histology		Modules 10, 11, 12, 13, 14, 15, 18, 19 and 21
Internal Medicine and Surgery		Modules 10-14, 21 Line courses in the second year
Internal Medicine		Internal Medicine module
Surgery		Surgery module
Gynaecology and Obstetrics		Module 15, Specific Examination Techniques line course, Gynaecology and Obstetrics module
Paediatrics		Module 16, Paediatrics module
Ophthalmology, Otorhinolaryngology, Dermatology and STI		Module 18
Ophthalmology		Ophthalmology module
Otorhinolaryngology		Otorhinolaryngology module
Dermatology and STI (sexually transmitted diseases)		Dermatology module
Neurology		Module 19, Neurological Status line course, Neurology module
Psychiatry		Module 20, Psychiatry module
Social Medicine and Forensic Medicine		Modules 6 & 22

3 DENTISTRY DEGREE PROGRAMME (N203)

3. 1 Overview

THE VIENNA MEDICAL CURRICULUM is based on integration of non-clinical and clinical learning: in each **learning unit (Module)** students learn about structure and function, as well as the most important and most common diseases and therapies. In addition there are courses called “**Lines**” which take place throughout the semester. They connect module content with clinical work by focusing on clinical skills.

Problem based learning (PBL) and **case based learning (CBL)** supplement other instructional methods.

Phase three of the Dentistry degree programme (semesters 7-12) focuses on intensive clinical training.

The most outstanding feature of the Vienna Medical Curriculum is its practice-orientated nature. Patient contact starts in the third semester.

A range of different forms of assessment are used throughout the programme:

Continuous assessment in practical courses and seminars (assessment on the basis of ongoing written or oral contributions within the framework of the course). Some seminar courses follow a **team-based learning** format.

FIPs (FORMATIVE INTEGRATED EXAMS) at the end of semester one: this multiple choice exam provides students with feedback on their learning performance.

SIPs (SUMMATIVE INTEGRATED EXAMS) at the end of each academic year: multiple-choice tests assessing students’ knowledge of course content from an entire academic year. This exam must be passed to receive ECTS credits for the courses taken during the respective academic year.

Special arrangements are made for exchange students who only attend the University for the winter semester, so that they can take an appropriate examination.

The duration of the Dentistry degree programme is 12 semesters:

Phase I lasts two semesters.

Phase II lasts four semesters.

Phase III lasts six semesters.

As a graduation requirement students are required to write a diploma thesis (dissertation). Modules 7 and 17 focus on scientific training and enable students to perform the research for their thesis.

Module 1 Health and Illness (2)		Module 2 The Human Body (6)		Module 3 From Molecule to Cell (6)		FIP1	Module 4 Functional Systems and Biological Regulation (3)	Module 5 Genetics, Molecular & Cellular Communication (3)	Dental Practice Preparation I: Dentistry Fundamentals	Z-SIP1	
Social Skills First Aid, Problem based learning (PBL)											
Module 7 (SSM 1) Science and Medicine (2)		Module 8 Disease: Origins and Symptoms (6)		Module 9 Disease, Manifestation and Perception, General Pharmacobiology (6)			Module 10 Endocrinology and Metabolism (3)	Module 11 Cardiovascular System and Blood (5-6)	Module 12 Respiratory System (3)	Z-SIP2	
Basic Medical Skills, Medical Interview Problem based learning (PBL)											
Module 2.1 Masticatory Organs and Musculoskeletal System Practical: Histopathology Practical: Ergonomics and Training		Module 2.2 Oral Pathology and Internal Organs Practical: ENT Practical: Oral Pathology		Module 2.3 Brain, Sensory Organs and Pain Practical: Psychiatry and Pain Treatment		Module 2.4 Conservative Dentistry and Dental Restoration		Module 2.5 Paediatric Dentistry		Dental Practice Prep	
Disabled Patients I											
Dental Radiology		Module 2.6 Periodontology and Prophylaxis		Module 2.7 Cariology and Dental Restoration		Module 2.8 Conservative Dentistry and Fixed Prosthodontics		Module 2.9 Orthodontics		Z-SIP4+5	
Practical & Seminar: Radiology, Radiation Protection and Diagnostics		Practical: Periodontology and Prophylaxis		Practical: Cariology and Dental Restoration		Practical: Conservative Dentistry and Fixed Prosthodontics		Practical: Orthodontics			
Dental Clinical Traineeship											
Assessment: Dental Clinical Traineeship		Dental Extractions on Patients		Emergency Medicine		Dental Clinical Traineeship					
Dental Clinical Traineeship											
Emergency Medicine Refresher (Semester 12)											Z-SIP6
Practical: Maxillofacial Surgery (Semester 12)											
Legal, Ethical and Economic Fundamentals											M. K. P. (Defensor)

Phase I (two semesters)				
Semester 1 (winter semester)				
Module	Code / Year	ECTS-Credits		
		Lecture	Practical Course/ Seminar	Total
Health and Illness	1DIPLMM1	4.7	1.6	6.3
The Human Body	1DIPLMM2	10.0	1.6	11.6
From Molecule to Cell	1DIPLMM3	9.0	2.5	11.5
Social Skills	1DIPLML1		2.6	2.6
First Aid	1DIPLML2		1.1	1.1
Problem based learning (PBL)	1DIPLMPO L		1.1	1.1
Semester 2 (summer semester)				
Functional Systems and Biological Regulation	1DIPLMM4	6.5	3.3	9.8
Genetics, Molecular and Cellular Communication	1DIPLMM5	4.0	1.7	5.7
Dental practice preparation I: Dentistry Fundamentals	1DENTMPR P1	7		7
Health Assessment	1DIPLML3		1.1	1.1
Oral Hygiene	1DIPLML10		1.1	1.1
Manual Skills	1DIPLML11		1.1	1.1
Total for the year				60

Phase II (four semesters)				
Semester 3 (winter semester)				
Science and Medicine (SSM I)	2DIPLMM7	1.4	4.1	5.5
Disease: Origins and Symptoms	2DIPLMM8	8	3	11
Disease, Manifestation and Perception, General Pharmacotherapy	2DIPLMM9	6.2	4.9	11.1
Medical Interview A	2DIPLML4A		1.0	1.0
Basic Medical Skills	2DIPLML5		1.0	1.0
Problem based learning (PBL)	2DIPLMPOL		2.1	2.1
Semester 4 (Summer Term)				
Endocrinology and Metabolism	2DIPLMM10	3.5	0.7	4.2
Cardiovascular System and Blood	2DIPLMM11	5.3	2.9	8.2
Respiratory System	2DIPLMM12	3.3	1.1	4.4
Initial Dental Examination	2DIPLML6		1.0	1.0
Practical Revision Course	2DIPLML7		1.0	1.0
Dental Organ Morphology	2DIPLML8A		4.4	4.4
Case Based Learning (CBL)	2DIPLMCBL		2.1	2.1
Optional subjects	2DIPLMOPT4		2.0	3.0
Total for the year				63.9

Semester 5 (Winter Term)				
Module	Code / Year	ECTS-Credits		
		Lecture	Practical Course/ Seminar	Total
Masticatory Organs and Musculoskeletal System	3DENTMZ1	4.7	1.1	5.8
Oral Pathology and Internal Organs	3DENTMZ2	4.4	1.6	6
Brain, Sensory Organs and Pain	3DENTMZ3	4.9	0.4	5.3
Materials Science	3DENTMMS C	2.2	1.6	3.8
Disabled Patients I	3DENTML8 B		0.5	0.5
Optional subjects	3DIPLMOPT 5			9
Semester 6 (Summer Term)				
Medical Research Methods - SSM2	3DENTMSS M2	1	4.1	5.1
Dental practice preparation II: Dentistry skills	3DENTMPR P2	9.4		9.4
Occlusion I	3DENTM OC1		4.9	4.9
Occlusion II	3DENTM OC2		0.9	0.9
Anatomy of the Head-Neck Region and Dental Extraction	3DENTMHN R		6.4	6.4
Total for the year				57.1

Phase III (6 semesters)				
Semester 7 (winter semester)				
Module	Code / Year	ECTS-Credits		
		Lecture	Practical Course/ Seminar	Total
Dental Radiology, Radiation Protection and Diagnostics	4DENTMRDSE	2.8	2.2	5
Cariology and Dental Restoration	4DENTMZ4	1.7	5.1	6.8
Periodontology and Prophylaxis	4DENTMZ5	1.8	4.6	6.4
Conservative Dentistry and Fixed Prosthodontics	4DENTMZ6	2.1	6.2	8.3
Paediatric Dentistry	4DENTMPedDent	1.1	0.8	1.9
Disabled Patients II	4DENTML8C		0.4	0.4
Semester 8 (summer semester)				
PRACTICAL COURSE: FUNDAMENTALS OF PROSTHODONTICS, REMOVABLE PROSTHODONTICS	4DENTMZ7	2.8	6.8	9.6
Oral Surgery	4DENTMZ8	3	6.8	9.8
Orthodontics	4DENTMZ9	2.7	4.4	7.1
Thesis Seminar A	4DENTMTHSA			6
Total for the year				61.3

Semester 9 (winter semester)				
Module	Code / Year	ECTS-Credits		
		Lecture	Practical Course/ Seminar	Total
Emergency Medicine	5DENTMEM	0.4	1.1	1.5
Dental Clinical Practical Course I (18 weeks)	5DENTMDC P1		1.3/week	24
Assistantships in preparation for Dental Clinical Traineeship	5DENTML9		7.3	7.3
Dental Extractions on Patients	5DENTMDE P		0.3	0.3
Semester 10 (summer semester)				
Dental Clinical Practical Course II (18 weeks)	5DENTMDC P2		1.3/week	24
Thesis Seminar B	5DENTMTH SB			6
Total for the year				63,1
Semester 11 (winter semester)				
Dental Clinical Practical Course III (18 weeks)	6DENTMDC P3		1.3/week	24
Thesis Seminar C	6DENTMTH SC			3

Semester 12 (summer semester)				
Emergency Medicine Refresher	6DENTMEM R		1.1	1.1
Maxillofacial Surgery	6DENTMMF S		5.6	5.6
Dental Clinical Practical Course IV (18 weeks)	6DENTMDC P4		1.3/week	24
Legal, Ethical and Economic Fundamentals	6DENTMLE EF	3.2		3.2
Thesis Seminar D	6DENTMTH SB			3
Total for the year				63.9

3.2 Course descriptions

3.2.1 Phase I (semester 1 and 2)

MODULE 1 1DIPMM1

Health and Illness

Semester: 1

Lectures: 49 hrs; 4.7 ECTS credits

Practical course: 17 hrs; 1.6 ECTS credits

Total: 66 hrs; 6.3 ECTS credits

Exam: written; part of SIP1

Contents: Lectures and small group classes provide students with an initial introduction to the main topics of medical studies. Topics of general relevance (such as gender specific issues, medical ethics, medical law, proper conduct with patients, etc.) are explored in more detail and in closer relation to practice in structured classes. Students are also prepared for the main topics to be covered by other modules in the first year.

MODULE 2 1DIPMM2

THE HUMAN BODY

Semester: 1

Lectures: 90 hrs; 9 ECTS credits

Practical course: 30 hrs; 2.6 ECTS credits

Total: 120 hrs; 11.6 ECTS credits

Exam: written; part of SIP1

Contents: The course covers the morphology and physiology of all organ systems of both genders, focusing especially on the musculoskeletal system, circulatory system, respiratory system, digestive system, urogenital system, endocrine and nervous systems (lectures and practical courses). After an introductory seminar on the basics of medical imaging as well as physics and radiation protection, the contents of the course are also explored in the context of example clinical applications in radiological anatomy.

MODULE 3

1DIPLM3

FROM MOLECULE TO CELL

Semester: 1

Lectures: 94 hrs; 9.0 ECTS credits

Practical course: 26 hrs; 2.5 ECTS credits

Total: 120 hrs; 11.5 ECTS credits;

Exam: written; part of SIP1

Contents: After presentation of the physical chemical principles essential for a general understanding of modern cell biology, the course deals with the organisation of prokaryotes and eukaryotes, cellular compartments, cell organelles, metabolism, energy production, transport, homeostasis, signal transduction, cell dynamics, information, organisation of the nucleolus, cell division and cell death.

Basic knowledge is supplemented by examination of clinical studies to provide a general understanding of normal cell behaviour and pathomechanisms.

The practical provides an introduction to expert methodology and laboratory work. In the seminars fundamental concepts are discussed and applied using examples.

LINE 1

1DIPML1

SOCIAL SKILLS

Semester: 1

Practical course: 30 hrs; 2.6 ECTS credits

Total: 30 hrs; 2.6 ECTS credits

Exam: continuous assessment

Contents: This line course consists of an introductory seminar, a practical course and regular tutorials. Seminars cover the theoretical aspects of the topic. In the practical course students have direct contact with patients. Additionally, observations are reflected on and discussed in the weekly tutorial. The goal is to provide students with an appreciation of adequate communication, empathy and understanding when treating patients, as well as of professional behaviour in an interdisciplinary team. The course also aims to encourage critical reflection and an awareness of gender specific, social and cultural issues influencing health and disease.

LINE 2A

1DIPML2A

FIRST AID

Semester: 1

Practical course: 15 hrs; 1.1 ECTS credits

Total: 15 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: The goal of this practical course is to practice (on a dummy) the skills required to give first aid efficiently and correctly according to general guidelines.

LINE PBL

1DIPOLPOL

PROBLEM BASED LEARNING

Semester: 1

Practical course: 15 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: The goal of this seminar course is to train students in the principles of problem based learning (PBL) and illustrate this method by means of practical examples.

MODULE 4

1DIPOLM4

FUNCTIONAL SYSTEMS AND BIOLOGICAL REGULATION

Semester: 2

Lectures: 68 hrs; 6.5 ECTS credits

Practical course: 34 hrs; 3.3 ECTS credits

Total: 102 hrs; 9.8 ECTS credits

Exam: written; part of SIP1

Contents: The lecture course gives an overview of the functions of the nervous system, the inner organs, and the physiological and biochemical aspects of metabolism with regard to endocrine regulation. In the practical course, students learn methods for examination of basic body systems (respiration, circulatory system, muscular functions, balance, neural regulation) as well as basic blood work analysis.

MODULE 5

1DIPOLM5

GENETICS, MOLECULAR AND CELLULAR COMMUNICATION

Semester: 2

Lectures: 42 hrs; 4.0 ECTS credits

Practical course: 18 hrs; 1.7 ECTS credits

Total: 60 hrs; 5.7 ECTS credits

Exam: written; part of SIP1

Contents: In the lectures, seminars and the practical course the organisation of the human genome, including principles of inheritance, genetic expression, and the cell cycle are discussed. Students also learn fundamentals of genetic technology, as well as its application in diagnosis and therapy. Additionally, the medical ethics aspects of gene technology are discussed and molecular aspects of morphogenesis are introduced.

DENTAL PRACTICE PREPARATORY I: DENTISTRY FUNDAMENTALS

1DENTMPRP1

Semester: 3

Lectures: 62 hrs; 7 ECTS credits;

Exam: written

Contents: The Dental practice preparatory I lecture course covers specific knowledge for dental medicine, concerning oral anatomy and histology, fundamentals of oral pathology, oral microbiology and hygiene, and dental terminology.

LINE 10 1DIPLML10

ORAL HYGIENE

Semester: 2

Practical course: 15 hrs; 1.1 ECTS credits

This line course provides an overview of different oral hygiene products, their application areas and how to give instructions to patients in respect of domestic oral hygiene. The course is held in theoretical and practical course units.

LINE 11 1DIPLML11

MANUAL SKILLS

Semester: 2

Practical course: 15 hrs; 1.1 ECTS credits

Students acquire and develop their manual skills by constructing predetermined three-dimensional shapes (cones, cylinders etc.).

LINE 3 1DIPML3

HEALTH ASSESSMENT

Semester: 2

Practical course: 15 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: Students practise physical examination techniques on healthy patients as well as basic techniques of infection control and hygiene

3.2.2 Phase II (semester 3 to 6)

MODULE 7 2DIPMM7

SPECIFIC STUDY MODULE 1 (SSM1): SCIENCE AND MEDICINE

Semester: 3

Lectures: 15 hrs; 1.4 ECTS credits

Practical course: 45 hrs; 4.1 ECTS credits

Total: 60 hrs; 5.5 ECTS credits

Exam: written and continuous assessment

Contents: Lectures cover the basics of medical research (structure, research methods) followed by an introduction to evidence based medicine (EBM). The practical course comprises medical information research (review of literature in particular) and an introduction to computer based learning. The compulsory option provides a first experience of academic research work: each student has to conduct literature research, compile an annotated bibliography and write and present an abstract on a specific topic.

MODULE 8 2DIPMM8

DISEASE: ORIGINS AND SYMPTOMS

Semester: 3

Lectures: 87 hrs; 8 ECTS credits

Practical course: 33 hrs; 3.0 ECTS credits

Total: 120 hrs; 11 ECTS credits;

Exam: written; part of SIP2

Contents: Lectures cover the fundamentals of patho-morphological responses (necrosis, inflammation, tumour), infectious disease, mechanisms of unspecific and specific (immune) defence, genetic and gender specific factors of pathogenesis, causes and mechanisms of canceration, pathogenetic mechanisms within the formation of vascular, clotting and degenerative diseases, basic neurobiology and as psychosocial factors of pathogenesis. Practical courses and seminars illustrate content from the lecture topics and allow insight into the methods and significance of applied diagnostic techniques. The patho-physiological principles of the development of clinical disease patterns are illustrated by means of prevalent and important examples.

MODULE 9 2DIPLMM9

MANIFESTATION AND PERCEPTION OF DISEASES, GENERAL PHARMACOTHERAPY

Semester: 3

Lectures: 67 hrs; 6.2 ECTS

Practical course: 53 hrs; 4.9 ECTS credits

Total: 120 hrs; 11.1 ECTS credits

Exam: written; part of SIP2

Contents: Within the scope of a lecture and a seminar series the somatic, psychological and gender specific causes and appearances of diseases are illustrated on the basis of prevalent, significant and typical patterns of disease. In addition, principles of general pharmacotherapy are introduced. The module also covers prevention, diagnosis and therapy of infectious diseases.

LINE 4A 2DIPLML4A

MEDICAL INTERVIEW A

Semester: 3

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Contents: In this practical course the student get to learn about and practise the underlying general, medical, biographical, family history, psycho-social and gender specific aspects of medical interviews. Instruction takes place in small group classes. Students take their first medical interview with a patient, and acquire the principles of communicating competently with patients about diagnosis and treatment steps.

LINE 5

2DIPLML5

BASIC MEDICAL SKILLS

Semester: 3

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Contents: This practical course provides standardised training for clinical competence in basic medical skills (e.g. taking blood samples, inserting a urinary catheter, etc.), as well as in hygienic behaviour and skills (hand hygiene, non-touch technique, etc.). The contents are taught and practised in small group classes using simulation models.

LINE PBL

2DIPLMPOL

PROBLEM BASED LEARNING

Semester: 3

Practical course: 30 hrs; 2.1 ECTS credits **Exam:** continuous assessment

Contents: The goal of this seminar course is to train students in the principles of problem based learning (PBL) and illustrate this method by means of practical examples.

MODULE 10

2DIPLMM10

ENDOCRINOLOGY AND METABOLISM

Semester: 4

Lectures: 38 hrs; 3.5 ECTS credits

Practical course: 8 hrs; 0.7 ECTS credits

Total: 46 hrs; 4.2 ECTS credits

Exam: written; part of SIP2

Contents: Lectures introduce anatomical, histological, physiological and biochemical basics, before discussing prevalent diseases of the endocrine organs, disorders of the carbohydrate, protein and lipid metabolism and diagnostic and therapeutic measures. Seminars explore the contents of the lecture programme in greater detail.

MODULE 11

2DIPLMM11

CARDIOVASCULAR SYSTEM AND BLOOD

Semester: 4

Lectures: 58 hrs; 5.3 ECTS credits

Practical course: 32 hrs; 2.9 ECTS credits

Total: 90 hrs; 8.2 ECTS credits

Exam: written; part of SIP2

Contents: In the first part of the lecture series students are provided with basic knowledge about the constitution, function and development of the cardiovascular and the haematopoietic systems in connection with clinical problems and taking account of gender specific aspects. The second part introduces cardiovascular and blood diseases, covering pathology and clinical evidence, diagnosis, therapy, prevention and rehabilitation. Practical classes consist of medical chemistry and physics exercises as well as an ECG course. Seminars address pharmacology and pharmacotherapy of cardiovascular and blood diseases.

MODULE 12 **2DIPLMM12**

RESPIRATORY SYSTEM

Semester: 4

Lectures: 36 hrs; 3.3 ECTS credits

Practical course: 12 hrs; 1.1 ECTS credits

Total: 48 hrs; 4.4 ECTS credits

Exam: written; part of SIP2

Contents: Lectures are aimed at consolidating knowledge of respiratory tract physiological and pathophysiological fundamentals, taking into account gender specific aspects, and cover the most prevalent diseases of the upper and the lower respiratory tracts, their pathogenesis (including psychosomatic causes) and diagnosis, and treatment options.

The interdisciplinary lecture programme also includes physiology, anatomy, physics, histology, pneumology, anaesthesiology, cardiothoracic surgery, radiology and paediatrics. In the seminars and the practical courses students investigate relevant disease patterns of the respiratory tract from an interdisciplinary perspective.

LINE 6 **2DIPLML6**

DENTAL EXAMINATION TECHNIQUES

Semester: 4

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Contents: Students learn how to conduct physical examinations of women and men, using role-plays and applying radiography to determine facial type. Basic hygienic behaviour is also addressed.

LINE 7 **2DIPLML7**

PRACTICAL REVISION COURSE

Semester: 4

Practical course: 15 hrs; 1.0 ECTS credits

Exam: continuous assessment

Total: 7 hrs; 0.5 ECTS credits

Contents: The goal of this practical course is to consolidate the contents of the semester 3 and 4 line courses (Basic Medical Skills, Medical Interview A + B, Dental Examination Techniques) and assessment of the skills acquired.

LINE 8A **2DIPLML8A**

DENTAL ORGAN MORPHOLOGY

Semester: 4

Practical course: 54 hrs; 4.4 ECTS credits

Total: 54 hrs; 4.4 ECTS credits

Exam: continuous assessment

Contents: In a series of classes spanning material from various modules, and featuring continuous assessment, students conduct anatomical dissection exercises and combine their findings with diagnostic imaging techniques, in order to gain an understanding of interpreting anatomical circumstances in a clinical diagnosis context. Students also acquire knowledge of topography relevant to the execution of surgical interventions.. After an introductory phase, in the dissection exercises reference is made to the most prevalent elements of all organ systems during the dissection process with a special regard to dental students.

LINE CBL **2DIPLMCBL**

CASE BASED LEARNING

Semester: 4

Practical course: 30 hrs; 2.1 ECTS credits

Contents: The goal of this course is to train students to record and successfully handle clinical case histories. Contents are based on the modules held parallel to the respective CBL class. This allows knowledge gained to be deepened with the help of practical case studies. Students are trained in and practise making a diagnosis and recommending treatment strategies. The interactive course is held by clinicians from the respective clinical field. Students are introduced to clinical thinking and work. Gender specific aspects are taken into account in the selection of case studies.

MODULE Z-1 3DENTMZ1

MASTICATORY ORGANS AND MUSCULOSKELETAL SYSTEM

Semester: 5

Lectures: 88 hrs; 4.7 ECTS credits

Practical course: 14 hrs; 1.1 ECTS credits

Total: 102 hrs; 5.8 ECTS credits

Exam: written; part of Z-SIP3

Contents: Students learn about the specific, normal and pathological processes of the musculoskeletal system in respect of biomechanics, anatomy and physiology. Emphasis is placed on deepening students' understanding of the biological behaviour of cartilage and osseous tissue, turnover and atrophy, prostheses and pathology of bone tissue, as well as knowledge ranging from oral and maxillofacial development to normal dental histology.

Application in dental clinical practice is established by lectures on general bone surgery, traumatology and septic surgery as well as conservative and surgical therapy of temporomandibular joint disorders. Key differential diagnoses of specific rheumatological diseases are also taught. Additionally, the students learn the principles of pathological stress responses relevant to their medical profession as dentists.

The module is complemented by a practical course on the histopathology of the most important bone and joint diseases as well as ergonomics and training.

MODULE Z-2 3DENTMZ2

ORAL PATHOLOGY AND INTERNAL ORGANS

Semester: 5

Lectures: 82 hrs; 4.4 ECTS credits

Practical course: 20 hrs; 1.6 ECTS credits

Total: 102 hrs; 6 ECTS credits

Exam: written; part of Z-SIP3

Contents: Lectures cover the anatomy, histology, physiology and pathology of the digestive tract with reference to oropharyngeal, oesophageal, gastrointestinal, hepatic and pancreatic disorders and diseases. Causes and consequences of nutritional disturbances are discussed, as well as treatment measures. Emphasis is placed on topics relevant to dentistry such as the salivary glands, oral mucosa and oral pathology.

- In one part of the lecture series, students learn about development, anatomy, function and prevalent diseases of the kidney and the urinary tract drainage system as well as about the role of the kidney in electrolyte and acid-base imbalances. The consequences of renal function disorders on the metabolism in the body as a whole are presented.
- Other lectures introduce the basic anatomical, embryological, histological, physiological and biochemical aspects of reproduction relevant to dentistry. The emphasis is placed on sexuality, ethics, psychosocial and forensic issues. Relevant aspects of gynaecology and urology are also discussed.
- This interdisciplinary module also provides students with required knowledge about hormonal balance, vitamins and the immune system.

Lectures are complemented by practical classes on Otorhinolaryngology and oral pathology.

MODULE Z-3

3DENTMZ3

THE BRAIN, SENSORY ORGANS AND PAIN

Semester: 5

Lectures: 92 hrs; 4.9 ECTS credits

Practical course: 4 hrs; 0.4 ECTS credits

Total: 96 hrs; 5.3 ECTS credits

Exam: written; part of Z-SIP3

Contents: In lectures on the nervous system students learn about specific aspects of neurology relevant to dentistry and acquire an overview of the sensory organs of the head-neck region, in consideration of relevant dental clinical pictures. The lectures focus especially on basic principles of neuroanatomy and neurophysiology and the resulting emphasis on the topic of “stress”. Emphasis is also placed on the topic of pain, its emergence and treatment. Students’ basic skills are complemented by an introduction to neurological symptoms and syndromes together with an overview of basic principles of psychiatry and the most important psychiatric clinical profiles. Additionally, lectures deal with aspects of the emergence of anxiety and its treatment. Sensory physiology and clinically relevant ophthalmological symptoms and syndromes are also described. The fundamentals of anaesthesiology are taught from a pharmacological and clinical practice point of view.

A practical course, including demonstration of the lecture topics from the fields of psychiatry and anaesthesiology relevant to dentistry complements the module. Practice-related aspects of anxiety and pain as well as the basic principles of hypnosis are also provided, and students gain practical insights into specific examination techniques.

MATERIALS SCIENCE

3DENTMMSC

Semester: 5

Lectures: 40 hrs; 2.2 ECTS credits

Practical course: 20 hrs; 1.6 ECTS credits

Total: 60 hrs; 3.8 ECTS credits

Contents: Lectures discuss the basics of material properties for materials used in dental surgery, covering physical and chemical characteristics and clinical knowledge of direct filling materials, of impression materials/model and die materials in endodontics, of metal in dentistry and synthetic materials in prosthodontics as well as waxes and prophylaxis materials. Basic physical and chemical properties and clinical knowledge of dental ceramics, dental implants and the basics of CAD/CAM technology are also presented. Students learn about the biocompatibility of dental materials. Lectures are complemented by a practical course on the use of dental materials.

DISABLED PATIENTS I

3DENTML8A

Semester: 5

Practical course: 7 hrs; 0.5 ECTS credits

Total: 7 hrs; 0.5 ECTS credits

Contents: This line course serves to acquaint students with the aspects of dental and oral hygiene to be taken into consideration when treating patients with physical or learning disabilities.

MEDICAL RESEARCH METHODS - SSM2

3DENTMSSM2

Semester: 6

Lectures: 12 hrs; 1 ECTS credits

Practical course: 50 hrs; 4.1 ECTS credits

Total: 62 hrs; 5.1 ECTS credits

Exam: written

Contents: The course consists of a compulsory and an option element. The compulsory part comprises a lecture and a seminar programme which covers fundamentals of statistics for planning scientific studies and evaluating projects; the roles of random fluctuation, measuring errors and biological

variability are also considered. Applicable international standards are addressed. In the small group classes (practical courses and seminars) for their option, students become acquainted with individual techniques of scientific work (laboratory, social science/psychology measurement methods). They apply techniques to a specific medical problem, taking into account quality control and quality assurance methods.

DENTAL PRACTICE PREPARATORY II: DENTISTRY SKILLS

3DENTMPRP2

Semester: 6

Lectures: 175 hrs; 9.4 ECTS credits

Practical course– Occlusion I: 61 hrs; 4.9 ECTS credits

Practical course– Occlusion II: 10 hrs; 0.9 ECTS credits

Practical course– The Head-Neck Region and Dental Extraction: 74 hrs; 6.4 ECTS credits

Total: 320 hrs; 21.6 ECTS credits

Exam: written

Contents: The Dental practice preparatory II comprises the final courses in phase two of the degree programme and consists of the lecture series and the practical courses Occlusion I and II, and the anatomical clinical course on The Head-Neck-Region and Dental Extraction. The course aims to provide students with the maximum practical preparation possible prior to phase three, the clinical practice part of the programme.

- Theory elements review and deepen students' knowledge of the osseous anatomy of the head/neck region, the cerebral nerves and their protrusion, and the masticatory organs, and link this material with aspects of dental practice.

The course also includes the topic of general dental examination techniques as well as the pharmacological, anatomical and clinical aspects of local anaesthetics for dental surgery. Students acquire fundamental radiological skills in preparation for content in the fourth year of the programme.

- Practical courses in Occlusion allow students to acquire, practice and test their technical and mental visualisation skills. Emphasis is placed on the morphology of teeth and dental arches as well as the dynamic relationship between them. Exercises involve carving and scaling individual teeth and tooth groups.

- The clinical anatomy practical course, The Head-Neck Region and Dental Extraction, builds on the theoretical knowledge from the lecture series in this module. Students acquire systemic and topographical knowledge of the anatomy of the head-neck region, with particular attention to multidisciplinary and clinical aspects. In addition, key dental surgery skills (e.g. use of local anaesthetics) are covered and practised under the supervision of qualified dentists.

3.2.3 Phase III (semester 7 to 12)

DENTAL RADIOLOGY, RADIATION PROTECTION AND DIAGNOSTICS4DENTMRD

Semester: 7

Lectures: 52 hrs; 2.8 ECTS credits

Practical course: 31 hrs; 2.2 ECTS credits

Exam: written

Total: 83 hrs; 5.0 ECTS credits

Contents: This module includes basic radiation protection technician training, basic principles of dental radiology diagnostics, and special training in the diagnostic application of X-rays, with a focus on miniature diagnostic radiography.

MODULE Z-5

4DENTMZ5

PERIODONTOLOGY AND PROPHYLAXIS

Semester: 7

Lectures: 38 hrs; 1.8 ECTS credits

Practical course: 67 hrs; 4.6 ECTS credits

Total: 105 hrs; 6.4 ECTS credits

Exam: written; part of Z-SIP4

Contents: The periodontology lecture and practical course covers theoretical and practical expertise in conservative periodontology and prophylaxis, dental aspects of microbiology and hygiene, and points of intersection with other dental disciplines.

Students acquire a theoretical understanding of the content in the lectures, which is applied in extensive exercises in the practical course.

MODULE Z-4

4DENTMZ4

CARIOLOGY AND DENTAL RESTORATION

Semester: 7

Lectures: 35 hrs; 1.7 ECTS credits

Practical course: 73 hrs; 5.1 ECTS credits

Total: 108 hrs; 6.8 ECTS credits

Exam: written; part of Z-SIP3

Contents: Lectures cover the fundamentals of conservative dentistry, as well as materials science, endodontics and laser use in dentistry. Students become familiar with the rules of and criteria for preparation, practise filling and restoration techniques, perform endodontic interventions on a dummy and undergo preparation for performance on a patient. Key aspects in relation to parodontology are addressed (e.g. combined periodontal and endodontic lesions).

MODULE Z-6 4DENTMZ6

CONSERVATIVE DENTISTRY AND FIXED PROSTHODONTICS

The aim of this module is to enable students to acquire knowledge and practical skills, allowing them to carry out high-quality dental care.

In the area of fixed prosthodontics it is essential for dental surgeons to possess the required capabilities so that they can provide optimal treatment. For this reason, plenty of time is allocated at the beginning of this module for students to learn and practise the various grinding techniques.

Course content is not limited to preparation of conventional crowns and inlays, and includes an extensive focus on the materials and techniques used in modern aesthetic dentistry. Production of all-ceramic restorations is covered, as are the related cementation methods.

Based on the knowledge gained in lectures on the fundamentals of materials used in fixed prosthodontics, students develop all of the expertise required to apply modern casting techniques and achieve the best possible results.

PAEDIATRIC DENTISTRY4DENTMPedDent

Semester: 7

Lectures: 16 hrs; 1.1 ECTS credits

Practical course: 12 hrs; 0.8 ECTS credits

Total: 28 hrs; 1.9 ECTS credits

DISABLED PATIENTS II 4DENTML8C

Semester: 7

Practical course course: 5 hrs; 0.4 ECTS credits

Total: 5 hrs; 0.4 ECTS credits

Contents: This line course serves to acquaint students with aspects of dental and oral hygiene to be taken into consideration when treating patients with physical or learning disabilities.

MODULE Z-7

4DENTM27

PRACTICAL COURSE: FUNDAMENTALS OF PROSTHODONTICS AND REMOVABLE PROSTHODONTICS

Semester: 8

Lectures: 54 hrs; 2.8 ECTS credits

Practical course: 104 hrs; 6.8 ECTS credits

Total: 158 hrs; 9.6 ECTS credits

Exam: written; part of Z-SIP5

Contents:

Students become familiar with standard preparation of crowns and inlays, as well as modern materials and techniques in the field of cosmetic dentistry. This means that full ceramic restorations are covered, including the required adhesive techniques.

Students acquire and practise the procedures required for prosthetic diagnosis and therapy, including imprint of the teeth, modelling, bite registration techniques, model mounting in an articulator and occlusion check,. Students practise simple pre-treatment methods for prosthetic treatments, such as the construction of a simple splint in an articulator, and checking its suitability in the mouth.

The module covers content on removable prosthodontics theoretically as well as practically.

Important interdisciplinary aspects of oral and maxillofacial surgery are also addressed in practical classes, as well as special operations such as pre-prosthetic orthodontics and crown lengthening.

MODULE Z-8

4DENTM28

ORAL SURGERY

Semester: 8

Lectures: 58 hrs; 3 ECTS credits

Practical course: 83 hrs; 6.8 ECTS credits

Total: 141 hrs; 9.8 ECTS credits

Exam: written; part of Z-SIP5

Contents: The courses in oral surgery (lectures and practical courses), maxillofacial Surgery (lectures) and periodontal surgery (lectures and practical courses) cover the surgical spectrum with an emphasis

on pre-prosthetic surgery, orthognathic surgery, inflammation and dental implants as well as traumatology, therapy schemas for the treatment of carcinoma and tumours, and periodontal surgical interventions. Special attention is also given to the high-risk dental patient. Building on the extraction expertise acquired in the Head-Neck Region and Dental Extraction practical course, students undertake dental extractions on real patients.

MODULE Z-9

4DENTMZ9

ORTHODONTICS

Semester: 8

Lectures: 51 hrs; 2.7 ECTS credits

Practical course: 64 hrs; 4.4 ECTS credits

Total: 115 hrs; 7.1 ECTS credits

Exam: written; part of Z-SIP5

Contents: The goal of the training in orthodontics is to provide students with an understanding of the fundamentals of this discipline, knowledge of the basic terminology of removable and fixed orthodontics, and an introduction to the materials and devices in use. Cranial growth is discussed in detail.

Clinical diagnosis procedures including skills relating to patient history and assessment provide the foundation for understanding orthodontic therapies.

Students also learn how to analyse orthopantomograms and other dental X-rays in detail. Lectures cover treatment with removable appliances in depth, as well as the basic principles of treatment with orthodontic braces.

Throughout this module great importance is attached to the interaction between orthodontics, periodontology, prosthodontics, oral surgery and maxillofacial surgery.

EMERGENCY MEDICINE 4DENTMEMM

Semester: 9

Lectures: 8 hrs; 0.4 ECTS credits

Practical course: 16 hrs; 1.1 ECTS credits

Exam: written and continuous assessment

Total: 24 hrs; 1.5 ECTS credits

Contents: The goal of this module, which includes a practical course, is for students to acquire knowledge and skills for managing the most important types of emergency situations that can occur in dental practice, with a special emphasis on practical application of diagnosis and therapy options for the treatment of acute problems. The organisational (emergency medical services, documentation, admission to hospital and intensive care) and ethical problems of acute medicine are discussed. In the practical course, students practise handling various cases of emergency (unconsciousness, respiratory arrest, cardiac arrest, anaphylaxis, etc.) on a dummy.

DENTAL EXTRACTIONS ON PATIENTS 5DENTMDEP

Semester: 9

Practical course: 5 hrs; 0.3 ECTS credits

Exam: continuous assessment

Total: 5 hrs; 0.3 ECTS credits

Contents: Students receive demonstration of and practise in carrying out dental extractions, building on the expertise acquired in the practical course on The Head-Neck Region and Dental Extractions.

LINE 9 5DENTML9

ASSISTANTSHIPS IN PREPARATION FOR DENTAL CLINICAL TRAINEESHIP

Semester: 9

Practical course: 108 hrs; 7.3 ECTS credits

Exam: continuous assessment

Contents: Throughout their assistantships, students undergo ongoing preparation for treating patients independently, by being intensively involved in the treatment of patients at units in the Bernhard Gottlieb University Clinic for Dentistry. Students become familiar with treatment methods, strategies and planning. The timing of the assistantships is not restricted to the period of the respective semester, but can be completed throughout the whole calendar year, but must be completed close to the beginning of the 72-week internship (according to availability).

5DENTMDCP1

Practical courses: (18 weeks); 1.3 ECTS credits/week

Total: 24 ECTS credits;

Exam: continuous assessment

SEMESTER 10

5DENTMDCP2

Practical courses: (18 weeks); 1.3 ECTS credits/week

Total: 24 ECTS credits;

Exam: continuous assessment

SEMESTER 11

6DENTMDCP3

Practical courses: (18 weeks); 1.3 ECTS credits/week

Total: 24 ECTS credits;

Exam: continuous assessment

SEMESTER 12

6DENTMDCP4

Practical courses: (18 weeks); 1.3 ECTS credits/week

Total: 24 ECTS credits;

Exam: continuous assessment

THESIS SEMINARS

These courses enable students to independently pursue their learning aims under the guidance of university professors (guided self-study).

THESIS SEMINAR A 4DENTMSSTA

Semester: 8

Total: 6 ECTS credits

THESIS SEMINAR B 5DENTMSSTB

Semester: 10

Total: 6 ECTS credits

THESIS SEMINAR C 6DENTMSSTC

Semester: 11

Total: 3 ECTS credits

THESIS SEMINAR D 6DENTMSSTD

Semester: 12

Total: 3 ECTS credits

PRACTICAL COURSE: MAXILLOFACIAL SURGERY 6DENTMPR MFS

Semester: 12

Practical course: 81 hrs; 5.6 Credits

Exam: continuous assessment

Contents: The practical course in Maxillofacial Surgery provides an overview of maxillofacial surgery, with an emphasis on routine inpatient procedures, for instance taking blood samples and parenteral therapy.

LEGAL, ETHICAL & ECONOMIC FUNDAMENTALS 5DENTMLEEF

Semester: 12

Lectures: 60 hrs; 3.2 ECTS credits

Exam: written

Contents: This lecture course introduces essential principles of medical law and social security law. Additionally, the topics of social medicine, employment law and occupational medicine are addressed, as well as gender-specific aspects.

EMERGENCY MEDICINE REFRESHER 6DENTMEMR

Semester: 12

Practical course: 16 hrs; 1.1 ECTS credits

Exam: continuous assessment

Contents: The Emergency Medicine Refresher provides students with a review of emergency situations in dental practice before they are admitted to their degree.

The goal of this module, which includes a practical course, is for students to acquire knowledge and skills for managing the most important types of emergency situations that can occur in dental practice, with a special emphasis on practical application of diagnosis and therapy options for the treatment of

acute problems. The organisational (emergency medical services, documentation, admission to hospital and intensive care) and ethical problems of acute medicine are discussed. In the practical course, students practise handling various cases of emergency (unconsciousness, respiratory arrest, cardiac arrest, anaphylaxis, etc.) on a dummy.

DENTAL CLINIC INTERNSHIP

Contents:

During their internship, students are trained in multidisciplinary patient care under the supervision and instruction of qualified dentists with authorisation to practise. Students acquire knowledge and specialised skills in case history, diagnosis, drawing up multidisciplinary treatment schedules, carrying out practical radiography and hygiene treatments, and performing dental laboratory tests.

The 72-week internship must be completed in individual departments at the Bernhard Gottlieb University Clinic of Dentistry, namely:

- Central Dental Clinic: at least 60 days from semester 9 to 12
- Orthodontics Unit: at least 45 days in total from semester 11 and 12
- Oral Surgery Unit: 45 days from semester 9 to 12
- Hygiene and Sterilisation: at least 10 days during semesters 9 and 10

During the 72-week internship, students focus on:

- Semesters 9 and 10: Conservative Dentistry and Periodontology
- Semesters 11 and 12: Prosthodontics and Surgery

4 MEDICAL INFORMATICS MASTER'S PROGRAMME (N936)

The aim of the master's programme in Medical Informatics is to provide students with the professional academic basis needed to design and implement informatics projects in various fields of biomedical research, medicine and health care. Students can choose to specialise in bioinformatics, neuroinformatics, clinical informatics or public health informatics.

Informatics methods are highly significant in medicine because of the complexity of the field and its importance. Such methods are applied to structure medical information, evaluate the quality of information, analyse digital and digitised information, model and support workflows in patient management, and to visualise information, as well as in image processing, treatment planning, telemedicine and within the framework of public health and health care provision.

Studies take place over four semesters and comprise 120 ECTS Credits.

Over the four semesters, students attend compulsory taught courses amounting to 80 hours.

The academic degree awarded is Diplom-Ingenieur(in) (DI), equivalent to a master's qualification.

COURSE CATALOGUE MEDICAL INFORMATICS				
1. Term	Basic Courses	Enhanced Courses	Interdisciplinary Informatics	
	Module 1 Taxonomy, Net working & Text Mining	Module 3 Statistics for Medical Informatics	Module 9 Advanced Software Engineering	
	Module 2 Data Bases, Cross linking & Evaluation Systems			
	Core subjects: combination 1 Block Bioinformatics	Core subjects: combination 2 Block Neuroinformatics	Core subjects: combination 3 Block Clinical Informatics	Core subjects: combination 4 Block Public Health Informatics
	Module 10 Introduction to Bioinformatics	or Module 14 Introduction to Neuroscience	or Module 18 Signal Processing and Data Visualization	or Module 21 Public Health Policy and Healthcare Management
2. Term		Enhanced Courses (cont.)	Interdisciplinary Informatics (cont.)	
		Module 4 Medicine for Medical Informatics	Module 6 Intelligent Data Analysis	
		Module 5 System Analysis & Image Processing	Module 7 Man-Machine Interfaces	
			Module 8 Knowledge-based Systems	
3. Term	Core subjects: combination 1 (cont.)	Core subjects: combination 2 (cont.)	Core subjects: combination 3 (cont.)	Core subjects: combination 4 (cont.)
	Module 11 Applied Bioinformatics	Module 15 Introduction to Neuroinformatics	Module 19 Application in Clinic & Research	Module 22 Epidemiology und Biostatistics
	Module 12 Extended Basics of Bioinformatics	or Module 16 Cell Biology of Neurons	Module 20 Information Systems & Decision Support	Module 23 Information Systems
	Module 13 Bioinformatics: Practical Course	Module 17 Signal Processing in Nervous Systems		
	Attention: One of the 4 combinations of the Core Subject has to be chosen!			
4. Term	Electives + Thesis Tutorials			
	Master thesis + Thesis Tutorials			

5 Editorial information

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