



UNIVERSITÄT ZU LÜBECK



# Course Guide Medicine

IM FOCUS DAS LEBEN

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## The University of Lübeck

Research and teaching at the University of Lübeck started in the field of medicine, but our computer science, natural sciences, and engineering faculties today encompass much more. The common element among them is their emphasis on life sciences, also mirrored by our motto, *Im Focus das Leben* (Focus on Life).

We offer degree programmes in Medicine, Computer Science, Molecular Life Science, Computational Life Science, Medical Engineering Science, Infection Biology and Psychology. We initiated a master's programme in Biomedical Engineering in collaboration with the University of Applied Sciences of Lübeck.

Compared with other universities, the University of Lübeck is small, with just 3,400 students – but boasts a good teacher-student ratio. The high standings of our computer science and medicine students underscore the high standard of our teaching and education.

Concerning research in medicine the University of Lübeck places particular emphasis on the special research fields "Infection and inflammation", "Brain, Behavior and Metabolism" and "Biomedical Engineering".

## Contacts

### **International Office**

All information concerning the application process and enrolment can be found on our website: [www.uni-luebeck.de/international](http://www.uni-luebeck.de/international)

International Coordinators: Una Doherty, Karolin Saenger

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### **Coordinator for Medical Studies**

All information concerning the curriculum can be found on our website: [www.medizin.uni-luebeck.de](http://www.medizin.uni-luebeck.de)

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## **Grading System**

### ***ECTS Credits***

The credits are a numerical value allocated to course units to describe the students' workload required to complete them. In ECTS, 60 credits represent the average workload of an academic year of study and normally 30 credits for a semester. The credits of each course unit thus reflect the workload of the unit in relation to the total semester workload as a fraction of 30 and are a relative rather than an absolute measure of student workload. It has to be mentioned that there is no relationship between ECTS credits and the level or difficulty of a course unit. Credits are awarded only when the course has been completed and all required examinations have been successfully taken.

Two semester periods correspond to approximately 3 ECTS. Short time clinical electives (German Famulatur) with 40 hs per week amount to 2 ECTS weekly and the last year clinical elective (practical year) is credited with 20 ECTS per 16 weeks.

### ***Transcript of Records***

Home and host institutions prepare and exchange Transcripts of Records for each student participating in ECTS before and after the period of study abroad. Every course taken by the student is recorded on the transcript with not only the ECTS credits but also the grade awarded according to the local grading scale and, when available, the ECTS grading scale. A copy of transcripts is given to the student for his/her personal file. The home institution recognises the amount of credits received by their students from partner institutions abroad in respect of specific course units such that the credits for the course unit replace the credits which would otherwise have been obtained from the home institution.

### ***Learning Agreement***

The Learning Agreement contains the list of courses to be taken and agreed upon by the student and the responsible academic body of the institution concerned. In the case of credit transfer, the Learning Agreement has to be agreed upon by the student and the two institutions concerned before the student's departure and to be updated immediately when changes occur.

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## ***Grading Scheme Human Medicine***

<b>local grade</b>	1.0 – 1.5	above 1.5 – 2.5	above 2.5 – 3.5	above 3.5 – 4.0	above 4.0
<b>equivalent</b>	very good	good	satisfactory	sufficient	fail
<b>definition</b>	outstanding performance	significant above average standard	average standard in all respects	fair but with significant shortcomings	insufficient in all respects

## Medical Studies in Germany

Please note: this is a general overview given as an introductory description of Medical studies in Germany. You will find the courses offered for exchange students in the section 'Medical Studies in Luebeck'.

Medical studies in Germany are subdivided into:

- 1) The preclinical part with a minimum of 2 years of studies, and
- 2) the clinical part with a minimum of 4 years of studies including the Practical Year.

1) The **preclinical part** comprises the following compulsory subjects:

- Physics
- Chemistry
- Biology
- Physiology
- Biochemistry / Molecular Biology
- Macroscopic Anatomy
- Microscopic Anatomy
- Medical Psychology and Sociology
- Introduction to Clinical Medicine
- Introduction to Medical Professions
- Medical Terminology
- Elective subject
- First Aid

Practical training in a hospital or another medical facility (3 months)

2) The **clinical part** takes at least 8 semesters and is subdivided into

- a) The clinical-theoretical and the clinical-practical part (3 years) and
- b) the clinical Practical Year (1 year)

2a) The clinical-theoretical and clinical-practical part comprises the following compulsory courses:

- Anaesthesiology
- Block Practical General Medicine
- Block Practical Gynaecology and Obstetrics
- Block Practical Internal Medicine
- Block Practical Paediatrics
- Block Practical Surgery



- Clinical Chemistry, Laboratory Diagnostics
- Clinical Environmental Medicine
- Clinical Pathological Conference
- Clinical Pharmacology, Pharmacotherapy
- Dermatology, Venerology
- Elective Subject
- Emergency Medicine
- Epidemiology, Medical Biometrics und Medical Informatics
- Forensic Medicine
- General Medicine
- Geriatrics
- Gynaecology and Obstetrics
- Health Economics, Health System, Public Health Service
- History, Theory, Ethics of Medicine
- Human Genetics
- Hygiene, Microbiology, Virology
- Image Processing Methods, Radiotherapy, Radiation Protection
- Diagnosis and Therapy of Infectious Diseases
- Internal Medicine
- Neurology
- Occupational Medicine, Social Medicine
- Ophthalmology
- Orthopaedics
- Otorhinolaryngology
- Paediatrics
- Pain Medicine
- Palliative Medicine
- Pathology
- Pharmacology, Toxicology
- Preventive Health Care, Health Care Planning
- Psychiatry, Psychotherapy
- Psychosomatal Medicine and Psychotherapy
- Rehabilitation, Physical Medicine, Treatment by Natural Remedies
- Surgery
- Urology

Additionally each student spends four months of clinical electives.

2b) The Practical Year consists of 48 weeks of practical training on the wards of either the University Hospital and/or teaching hospitals divided into 16 weeks in Internal Medicine, 16 weeks in Surgery, 16 weeks in an elective subject. Admission is granted when all credits of the clinical theoretical and clinical practical part are passed.

Please note: For the practical year (or parts of it) an application via the International Office is obligatory.

### **State Examinations**

Medical students in Germany have to pass one preclinical state examination and one clinical state examination (both written and oral):

The first examination will be taken after 4 semesters of preclinical studies. The written part of the second examination will be before entering the practical year and the oral part after.

## Medical Studies in Lübeck

The Medical studies in Lübeck are science-based and interdisciplinary, thus preparing students for examination and practical work, while the curriculum offers ideal opportunities for research, studying abroad or social commitment.

The clinical part is structured as follows from the table.

**Please note that courses from different years can only be taken when courses are not overlapping and after consultation with the International Office. Furthermore consultation is necessary if only one term/part of cumulative or two-part courses will be taken.**

**There is no possibility to choose only parts of single courses or single exams.**

**Please be aware that you will be required to attend courses for complete semesters in order to achieve the ECTS credits awarded. Should your needs differ from this requirement, we request that you contact us well in advance to discuss options.**

**The lecture periods are generally as follows:**

***Winter semester from about 10.10. to 15.02. and***

***Summer semester from about 01.04. to 15.07.***

***Please refer to the university website for the exact dates.***

**Any German language courses offered will take place in the 3 weeks prior to the beginning of the semester.**

### Clinical Studies in Human Medicine for exchange students

Third year (=first year of Clinical Studies)	Offered in
Clinical Environmental Medicine	winter only
Emergency Medicine	summer and winter
History, Theory and Ethics of Medicine	summer and winter
Hygiene, Microbiology, Virology	summer and winter
Human Genetics	summer only
Interdisciplinary Medical Examination Training (cumulative grade): Internal Medicine Gynaecology and Obstetrics Paediatrics Surgery	Internal Medicine and Surgery in winter, the other subjects in summer

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Interdisciplinary (cumulative grade): Clinical Chemistry, Laboratory Diagnostics Pathology (2 parts) Pharmacology, Toxicology (2 parts)	Clinical Chemistry in summer only, the rest part one in winter and part two in summer
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Fourth Year (=second year of Clinical Studies)	Offered in
Anaesthesiology	summer and winter
Block Practical Gynaecology and Obstetrics	summer and winter
Block Practical Internal Medicine (additionally 2-part lecture, part I in winter, part II in summer)	summer and winter
Block Practical Paediatrics (additionally 2-part lecture, part I in winter, part II in summer)	summer and winter
Block Practical Surgery (additionally 2-part lecture, part I in winter, part II in summer)	summer and winter
Clinical-Pathological Conference (2 parts)	part one in winter, part two in summer
Clinical Pharmacology / Pharmacotherapy (2 parts)	part one in winter, part two in summer
Forensic Medicine (additionally 2-part lecture)	summer and winter
Occupational Medicine, Social Medicine Including: Health Economics, Health System, Public Health Service/ Preventive Health Care, Health Care Planning/ Rehabilitation, Physical Medicine, Treatment by Natural Remedies, (Epidemiology)	summer and winter

Fifth Year (=third year of Clinical Studies)	Offered in
Block Practical General Medicine (only in combination with General medicine)	summer and winter
Dermatology, Venerology	summer and winter
Epidemiology, Medical Biometrics, Medical Computer Science	summer and winter
General Medicine (lecture and seminar)	summer and winter
Geriatrics	summer and winter
Diagnosis and therapy of infectious diseases	summer and winter
Ophthalmology	summer and winter
Orthopaedics	summer and winter
Otorhinolaryngology	summer and winter
Interdisciplinary (cumulative grade): Neurology (additionally 2-part lecture) Psychiatry and Psychotherapy (only in combination with psychosomatics) Psychosomatics and Psychotherapy (see Psychiatry)	summer and winter
Urology	summer and winter

### ***1<sup>st</sup> year of clinical studies***

- Clinical Environmental Medicine
- Emergency Medicine
- History, Theory and Ethics of Medicine
- Hygiene, Microbiology, Virology
- Human Genetics
- Interdisciplinary Medical Examination Training (Internal Medicine, Gynaecology and Obstetrics, Paediatrics, Surgery)
- Clinical Chemistry, Laboratory Diagnostics
- Pathology
- Pharmacology/Toxicology

## **Clinical Environmental Medicine “Problem-Based Learning”**

### **Aims and contents:**

Students will learn about diseases which are associated with environmental problems, for example they have to answer the question: Is there any relation between intestinal cancer and pesticides? Students will be asked this question -or another like it- at the beginning of the term. They have to look into the subject for themselves- the allotted tutor's business is only to observe them and to answer questions. He or she should only offer guidelines in order to direct the student's researches and studies. Furthermore the students learn how to deal with the general situation, that they are dependent on each other and have to solve the problems for themselves. One of the most important aims of the teaching unit is to learn to work as a team when confronted with a clinical question which has to be solved.

**Lecture:** Included in the practical course

**Course/practical:** 2 weeks daily at the beginning of the term, winter term only

**Type of exam:** Poster session at the end of the semester

3 ECTS

## **Emergency Medicine**

### **Aims and contents:**

Procurement of knowledge about techniques and procedures in emergency medicine. Students learn life-saving measures, artificial respiration and dummy-intubation, recognizing dysrhythmia and accordingly, remedies and electrical therapy, remedies in emergency cases, techniques of storage, paediatric, gynaecological and neurosurgical particularities in emergency cases.

**Lecture:** 1h per week

**Clinical training:** 2hs per week

**Type of exam:** Final test with multiple choice and text questions at the end of the term and OSCE (objective standardized clinical examination)

**Required equipment:** None

5 ECTS



## **History, Theory, Ethics of Medicine**

### **Aims and contents:**

The course History, Theory and Ethics of Medicine engages students of medicine with the historical development, social and theoretical contexts and ethical challenges of current medical practice. The students will acquire a basic knowledge in the fields of history, theory and ethics of medicine. They should be able to analyze, interpret and evaluate current medical literature.

**Lecture:** 1 h per week

**Course/practical:** 2 hs per week

**Type of exam:** Written exam at the end of the semester with multiple choice and text questions

**Required equipment:** None

5 ECTS

## **Hygiene, Microbiology, Virology**

### **Aims and contents:**

Students learn the pathogenesis, diagnosis, therapy and prevention of inflammatory diseases. In addition, they acquire knowledge how to prevent nosocomial infections.

Exercises include assessment of microbiological-hygiene laboratory findings or measures to be taken in the case of hygiene problems. According to this, students will learn how to deal with different diagnoses and take other possible diseases into consideration. Students are expected to do research on their own in medical literature and present their solutions and suggestions at the end of the course.

**Lectures:** 4 hs per week

**Course/practical:** 4 hs per week

**Type of exam:** Oral test at the end of the semester

**Required equipment:** None

11 ECTS

## **Human Genetics**

### **Aims and contents:**

Students have the opportunity to get inside into the whole spectrum of human genetics and the most important diseases which are topics of this teaching unit. Lectures cover for example subjects like genetic testing, risk calculation of hereditary diseases, genetic counselling and the prenatal diagnosis.

**Lectures:** 2 hs per week, summer term only

**Course/practical:** None

**Type of exam:** Written test at the end of the semester with multiple choice and text questions.

**Required equipment:** None

3 ECTS

## **Interdisciplinary Medical Examination Training**

### **Aims and contents:**

Students learn how to deal with different diseases, they should learn to examine patients and how to be involved in the everyday life in hospital. Furthermore, they learn how to use indwelling cannulas and accomplish blood collections.

The following main subjects are integrated in the course (cumulative grade):

#### Winter term: **Internal Medicine / Surgery**

Lectures: 2 hs per week, additionally 2 hs pathophysiology

Clinical training: 2 hs per week

Required equipment: Students should use stethoscopes, reflex hammer, small pupil torches and white coats in order to examine patients appropriately.

Type of exam: Oral tests at the end of the teaching unit.

#### Summer term: **Gynaecology and Obstetrics / Paediatrics**

Lectures: 2 hs per week, additionally 2hs paediatrics

Clinical training: 2 hs per week

Required equipment: Students should use stethoscopes, reflex hammer, small pupil torches and white coats in order to examine patients appropriately.

Type of exam: Oral tests at the end of the teaching unit.

Additionally partial rotation in different clinical subjects.

18 ECTS

## **Clinical Chemistry, Laboratory Diagnostics**

### **Aims and contents:**

Students will acquire knowledge about the theoretical and experimental aspects of laboratory parameters as well as about assessing laboratory findings. At the end of the term they should be able to select appropriate parameters for laboratory analysis and to interpret the laboratory findings in the context of clinical presentation.

**Lecture:** 2 hs per week, summer term only

**Course/practical:** 2 hs per week, summer term only

**Type of exam:** Final test with multiple choice

**Required equipment:** Lab coat

5 ECTS

## **Pathology**

### **Aims and contents:**

The main lecture deals with pathological mechanisms of diseases and their morphologic equivalents. The course in microscopic pathology presents the basics of general pathology in order to enable students to recognize pathological- physiological correlations and to understand the general phenomena of different diseases. In the course of macroscopic pathology the students learn to interpret macroscopic changes of various organs sampled during autopsies.

**Lecture:** 2 hs lecture per week for two terms (winter and summer)

**Course/practical:** 2 h course every other week for two terms (winter and summer)

**Type of exam:** Final test at the end of the semester with multiple choice and text questions. A test must be written at the end of each semester.

**Required equipment:** Students should use stethoscopes and white coats in order to examine patients appropriately.

7 ECTS

## **Pharmacology, Toxicology**

### **Aims and contents:**

Students learn the basics in pharmacology. In systematic lectures and courses students explore the pharmacology of various drugs and their respective mode of action, desired and adverse effects with an emphasis on functional and therapeutic aspects.

Basics in toxicology will also be reviewed. Selected toxicological topics (e.g. drug toxicology, toxicology of pesticides, accidental toxicology) and therapeutic measures for the treatment of poisonings are presented.

**Lectures:** 2 hs per week for two terms (winter and summer)

**Course/practical:** 4 hs every other week for two terms (winter and summer)

**Required equipment:** None

**Type of exam:** Written test at the end of each semester with multiple choice questions.

9 ECTS

### ***2<sup>nd</sup> year of clinical studies***

- Anaesthesiology
- Block Practical Gynaecology and Obstetrics
- Block Practical Internal Medicine
- Block Practical Paediatrics
- Block Practical Surgery
- Clinical-Pathological Conference
- Clinical Pharmacology / Pharmacotherapy
- Forensic Medicine
- Social Medicine

Including: Occupational Medicine/Social Medicine, Health Economics, Health System, Public Health Service/ Preventive Health Care, Health Care Planning/ Rehabilitation, Physical Medicine, Treatment by Natural Remedies



## **Anaesthesiology**

### **Aims and contents:**

At the end of the term, students should have acquired knowledge about the role and responsibility of an anaesthesiologist; they should understand the development of general and regional anaesthesia including the principals of intensive care medicine, postoperative pain therapy, and perioperative psychology. They should know anaesthetic drugs and risks, manual and mechanically ventilation techniques, and aim of premedication procedures. In the same way understanding of technical devices, e.g. ventilators and monitors, is one of the most important aims of this teaching unit.

**Lecture:** 1h per week

**Clinical training:** 2 weeks full time course

**Type of exam:** A written test at the end of the semester with multiple choice questions.

**Required equipment:** None (Students spend the time in the operating theatre and in seminars)

5 ECTS

## **Block Practical Gynaecology and Obstetrics**

### **Aims and contents:**

Students learn the basics of gynaecology and obstetrics by acquiring knowledge of diseases which occur in this field. For example prenatal diagnostics, menstrual cycle, the interaction of female hormones, the anatomy of female sex characteristics. In association with this, carcinoma of uterus and mamma, sexually transmitted diseases. Furthermore they are allowed to observe operations in association with breast cancer, diagnostic curettages or they may even witness the birth of a baby either by spontaneous delivery or caesarean section.

**Lecture:** 2 hs per week

**Clinical training:** 1 week course per term, week-end included

**Type of exam:** Short initial test at the beginning of the course and a written test at the end of the semester with multiple choice and text questions

**Required equipment:** Students should use a doctor's coat and stethoscope in order to examine the patients appropriately

5 ECTS

## **Block Practical Internal Medicine**

### **Aims and contents:**

In our faculty Internal Medicine is taught in the fourth year. The course comprises a lecture (Monday to Thursday 9-10 a.m.) and a training of three weeks in the department. Ten students are scheduled for the training every week. The first week consists of tutorials and workshops. During week 2 and 3 the students assist on the wards. A written homework (case history) is mandatory. The clinical skills trained during the course are tested in an OSCE after the training. The accompanying lecture is structured in four parts: I) Endocrinology and Nephrology. II) Gastroenterology, Oncology, Haematology, and Palliative Care. III) Respiratory Medicine and Cardiology. IV) Rheumatology, Infectious Diseases, and Angiology. Part I) and II) are taught in the winter semester (exams in January and April/May), part III) and IV) are taught in the summer semester (exams in June and July).

**Lecture:** 4 lectures (à 1h) per week for two terms (winter and summer)

**Clinical training:** 3 weeks full time course in winter or summer term

**Type of exam:** 4 written exams (January and April/May for winter term; June and July for summer term).

### **Required equipment:**

The lectures and the training are in German only. The attending students should be fluent in the language. Appropriate white coats and stethoscopes are required for the training. For more information, please go to <http://www.lehre-innere-hl.de>.

13 ECTS

## **Block Practical Paediatrics**

### **Aims and contents:**

Students will be provided with a structured curriculum about theoretical and basic clinical knowledge in paediatrics. The programme involves structured seminars on different topics, case presentations, and associated specialities, namely radiology. Teaching units are: acute medicine, neonatology, psychosomatics and psychotherapy, neuro-paediatrics, paediatric endocrinology and diabetes, social paediatrics, paediatric haematology, oncology and immunology, gastroenterology, pulmonology and allergology. In the courses, students are sent to the paediatric ward or outpatient clinic in order to examine and interview children and their parents. In this way they recognize on the one hand the social structure of the family, on the other hand they see different diseases and learn to establish contact with paediatric and adolescent patients.

**Lecture:** 2 hs lecture per week for two terms (winter and summer)

**Clinical training:** 2 weeks full time course in winter or summer

**Type of exam:** Oral test at the beginning of the term (themes can be seen in the script) and also at the end of the block, one written test at the end of the term (recommended after two terms of lecture, a possibility to take the written examination is given in every term).

**Required equipment:** Students should use stethoscopes and white coats in order to examine the patients appropriately

9 ECTS

## **Block Practical Surgery**

### **Aims and contents:**

Students are learning the whole field of basic and specific surgery. The main lecture covers general and abdominal surgery, vascular surgery, transplantation surgery, trauma and plastic surgery, pediatric surgery, neurosurgery, oral and maxillofacial surgery and cardiac surgery.

During the course, which is held on wards in different surgical departments, students become familiar with specific diseases via bedside teaching. They will interview and examine patients, discuss differential diagnoses of these diseases and acquire basic medical skills like venipuncture and dressing changes. Furthermore, they are given the opportunity to observe operations and take part in different courses where surgical skills, suture techniques, wound management and osteosynthesis can be learned.

**Lecture:** 3 lectures (à 1 h) per week for two terms (winter and summer)

**Clinical training:** 2 weeks full time course in winter or summer

**Type of exam:** Short oral test at the end of the practical course and written tests at the end of each semester with multiple choice questions.

**Required equipment:** Students should use white coats and stethoscopes in order to examine the patients appropriately.

11 ECTS

## **Clinical Pathological Conference**

### **Aims and contents:**

The aim of the teaching unit is to deepen the student's knowledge of the pathological mechanisms of diseases and their morphological equivalents. Various clinical cases are presented by a clinician and a pathologist. During the lecture, tutor and doctor speak to each other directly in order to involve the students in an interactive lecture. Tutors will illuminate histopathological aspects of various inflammatory and neoplastic disorders including diseases of the gastrointestinal tract, liver, lung, kidney, breast, lymph node and brain. This means that, at the end of the unit, students will be able to recognize diseases and their morphologic equivalents.

**Lecture:** 2 hs per week for two terms (winter and summer)

**Course/practical:** The course is included in the main lecture, in order to show students diseases which can respond to the preceding treatment.

**Type of exam:** Written test with multiple choice and text questions about the learning matter of one semester. A test must be written at the end of each semester.

**Required equipment:** None

5 ECTS

## **Clinical Pharmacology, Pharmacotherapy**

### **Aims and contents:**

Students learn the pharmacotherapy of selected diseases. Case histories and representative examples in combination with patient demonstrations are shown to the audience during an interdisciplinary lecture.

The background of pharmacotherapy as well as drug side-effects, pharmacokinetic properties and interactions are discussed in depth.

Furthermore, students are given detailed information about differential therapeutic considerations of the selected diseases.

**Lecture:** 2 hs per week for two terms (winter and summer)

**Course/practical:** Included in the main lecture

**Type of exam:** Written test at the end of each semester with multiple choice questions.

**Required equipment:** None

5 ECTS

## **Forensic Medicine**

### **Aims and contents:**

Students will take part in post mortems and discuss manner and cause of death. They learn how to fill in death certificates and how to describe wound morphology. They are taught in forensic medicine, judicial questions, ethics of euthanasia, basics of the medicinal law and problems regarding alcohol or drug consumption. Students are also required to present their knowledge by discussing different topics of forensic medicine applying the case study method including adequate knowledge about different forensic problems.

**Lecture:** 1 h per week for two terms (winter and summer)

**Clinical training:** 1 week full time course in winter or summer

**Type of exam:** Short initial test at the beginning of the course and a written test at the end of the semester with multiple choice and text questions

**Required equipment:** None

7 ECTS



## **Social Medicine**

(including occupational medicine/social medicine, health economics, the Health System, Public Health Service / Preventive Health Care, Health Care Planning / Rehabilitation, Physical Medicine, Treatment by Natural Remedies)

### **Aims and contents:**

Students are introduced to social medicine, epidemiology and evidence-based medicine: principles and methodology of research in (clinical) epidemiology are taught, furthermore prevention and diagnosis (screening); risk assessment, efficacy of therapeutic interventions (evaluation of medical and economic outcomes), consequences of diseases, and rehabilitation. Furthermore students will have some excursions in small groups and learn the basics of occupational diseases, including prevention; additionally the course deals with the basics of health systems and associated institutions.

**Lecture:** includes in the course

**Course/practical:** 2 weeks full time course

**Type of exam:** short oral test at the beginning of the course; students are required to give brief presentations of their preparatory studies, additionally oral presentation of excursions.

**Required equipment:** None

5 ECTS

***3<sup>rd</sup> year of clinical studies***

- Block Practical General Medicine
- Dermatology, Venerology
- Epidemiology, Medical Biometrics, Medical Computer Science
- General Medicine (lecture and seminar)
- Geriatrics
- Diagnosis and therapy of infectious diseases
- Ophthalmology
- Orthopaedics
- Otorhinolaryngology
- Neurology
- Psychiatry and Psychotherapy
- Psychosomatics and Psychotherapy
- Urology

## **Block Practical General Medicine**

(Block Practical only in combination with course 'General Medicine' (lecture and seminar) and only in the end of the term/in the second term after consultation with the International Office).

### **Aims and contents:**

Students learn how to care for patients who suffer a disease which can be treated with practical general medicine. The basic knowledge required here includes how to deal with internal medicine, orthopaedics, haematology, infectious diseases, graduated schemes, special remedies for different clinical phenomena, acute emergencies. Furthermore they get to know the everyday life of a general practitioner. To this end, they have to observe the work of such a physician two weeks per term.

**Lecture:** 2 hs per week (seminar integrated)

**Clinical training:** 2 weeks per term

**Type of exam:** Written test with multiple choice and text questions

**Required equipment:** Students should use a doctor's coat and stethoscope during the course

ECTS: see General Medicine

## **Dermatology, Venerology**

### **Aims and contents:**

Students are introduced to the whole field of dermatology and venerology, for example: typical or important dermatoses incl. skin tumours, allergy and dermatopathology, phototherapy, clinical skin tests, and dermatomycology. Furthermore students learn the basics of dermatological nomenclature, description of skin lesions, etiology, clinical presentation of common or life-threatening dermatosis, differential diagnosis, management of selected skin diseases.

**Lecture:** 3 hs per week

**Clinical training:** 5 hs per week for 5 consecutive weeks

**Type of exam:** Short initial test at the beginning of the course and more extensive final test at the end of the semester (both are multiple choice tests).

**Required equipment:** Doctor's coat, dermatology text book, writing pad

5 ECTS

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## **Epidemiology, Medical Biometrics, Medical Computer Science**

### **Aims and contents:**

This course is taught in the 4th (Epidemiology) and 5th year of clinical studies (Biometrics and Computer Science) and can thus only be taken if no overlappings arise.

Students learn to understand, evaluate and describe statistical analysis and outcomes. They are introduced to the basics of medical computer science as well as to the use of relevant software.

### **Lecture:**

Epidemiology: lecture integrated in the course/practical

Biometrics: lecture integrated in the course/practical

Medical Computer Science: 2 hs per week with practical training

**Course/practical:** see above

### **Type of exam:**

Epidemiology: integrated in the course 'social medicine'

Biometrics: written exercises

Medical Computer Science: written test at the end of term

**Required equipment:** none

7 ECTS

## **General Medicine**

(Lecture and Seminar)

### **Aims and contents:**

Lecture and seminar give an introduction to diagnosis, therapy and prevention in primary care. Case studies are presented and discussed.

Students learn how to care for patients who suffer a disease which can be treated with practical general medicine. The basic knowledge required here includes how to deal with internal medicine, orthopaedics, haematology, infectious diseases, graduated schemes, special remedies for different clinical phenomena, acute emergencies.

**Lecture:** Lecture and seminar integrated

**Type of exam:** Written test at the end of the term.

**Required equipment:** None

5 ECTS

## **Geriatrics- "Problem-Based Learning"**

### **Aims and contents:**

Students learn about diseases that are associated with geriatrics; they get to know the physis and psyche of elderly patients who are not able to take care of themselves. Associated diseases are for example: Alzheimer`s disease, Parkinson`s syndrome, different types of diabetes, apoplexy, hypertension, myocardial infarction, depression, neurological problems associated with alcohol abuse. Some of these subjects are lectured upon in detail so that the students are able to deepen their clinical knowledge.

**Lecture:** 2 days part-time course (Friday, Saturday)

**Clinical training:** Included in the lecture

**Type of exam:** Written test with text questions at the end of the term.

**Required equipment:** None

2 ECTS

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## **Diagnosis and Therapy of Infectious Diseases**

### **Aims and contents:**

Students are introduced to diagnostic procedures and antimicrobial therapy of common infectious diseases. In addition, inborn and acquired deficiencies of the immune system are addressed.

Based on everyday cases, in an interactive way major organ system infections are discussed with the attending physicians; students are expected to formulate diagnostic hypotheses and to suggest treatment options. Topics include diseases of the gastrointestinal, respiratory, urinary tract, the central nervous system and the skin. In addition, common tropical diseases are covered. At the end of the course, students will be able to suggest diagnostic and therapeutic algorithms and will have knowledge on primary and secondary preventive measures.

**Lecture:** 2 hs per week

**Course/practical:** Seminar included in the lecture

**Type of exam:** Oral test at the end of the semester

2 ECTS



## **Ophthalmology**

### **Aims and Contents:**

Students get to know the main topics of typical ophthalmological diseases; e.g. micro-surgery of the eye, differential diagnoses of retinal diseases, angiography in ophthalmology, diagnosis and treatment of the macula, clinical and pathological correlation of special ophthalmological diseases, special surgery techniques, an introduction to ophthalmological examination, application of laser techniques.

**Lecture:** 2 hs per week

**Clinical training:** 5 hs course per week for 5 consecutive weeks

**Type of exam:** Written test at the end of the semester with multiple choice and text questions.

**Required equipment:** None

5 ECTS

## **Orthopaedics**

### **Aims and contents:**

In this subject, students will learn about the most important classic orthopaedic diseases; a detailed introduction will be given. Students are shown how to examine a person with an orthopaedic problem manually and by anamnesis. The course will introduce to manual medicine, scientific work in the field of orthopaedic surgery, biomaterials and biomechanics, sports orthopaedics as well as self-examination within the student's group.

**Lecture:** 1 h per week

**Clinical training:** 2 hs per week for 5 consecutive weeks

**Type of exam:** Written test at the end of the semester with multiple choice and text questions

**Required equipment:** Doctor's coat, goniometer, reflex hammer

3 ECTS

## **Otorhinolaryngology (Ear, Nose and Throat)**

### **Aims and contents:**

The ENT course offers students an excellent clinical experience in the field of otolaryngology and head and neck surgery. Students are exposed to the examination techniques of the ear, nose, nasopharynx, mouth, larynx, and neck as well as history taking. They will have exposure to diagnostics and treatment of diseases in the hearing and vestibular system, pediatric otolaryngology, head and neck cancer, voice disorders, traumatology, sleep apnoea syndrome, allergy, plastic and reconstructive surgery, tracheostomy/cricothyrotomy, ultrasound as well as the more routine problems of otitis media, head and neck infections, chronic sinusitis, nose bleeding and many more. The course consists of 5 practical training days and there is a lecture parallel to the course during the semester to expand the knowledge.

**Lecture:** 2 hours per week

**C Clinical training course:** 4 hs per week for 5 consecutive weeks

**Type of exam:** multiple choice test at the end of the semester.

Requirement for receiving course credit certificates: passed test + attendance on all of the 5 course days

**Required equipment:** Doctor's coat

5 ECTS

## **Neurology**

### **Aims and contents:**

Students learn the basics of neurology. Most of the course and lecture deal with neurological diseases in detail, and a small part is devoted to the neuro-surgical department (3 units). Students will examine patients and apply the knowledge provided in the lectures. The course will focus on symptoms-related neurological skills at the bedside. Important themes will be: multiple sclerosis, stroke, degenerative diseases, dementia, neuroanatomy of brain and spinal cord, tumours of brain and spinal cord, intervertebral disc degeneration, craniocerebral trauma, skull-base fractures, meningitis, and cranial nerve neuropathies. There will be an examination at the end of the teaching unit / lecture.

**Lecture:** 2 hs per week (for two terms, winter and summer)

**Clinical training:** 2 hs per week for one term

**Type of exam:** Written test at the end of the semester.

**Required equipment:** Required equipment: Students should use a doctor's coat, stethoscope, reflex-hammer and small pupil torches. With these items they will be able to examine the patients appropriately.

7 ECTS

## **Psychiatry, Psychotherapy**

(only in combination with Psychosomatics)

### **Aims and contents:**

Students become familiar with the most important aspects of psychiatric disorders, relevant biological and psychological findings and theories. The focus is upon clinical aspects of psychiatric disorders, like schizophrenia, major and minor depression (double depression), compulsive acts, borderline cases, sometimes in relationship with suicide. Students must learn interview techniques in order to deepen their understanding of psychiatric symptomatology.

**Lecture:** 6hs per week for 4 consecutive weeks

**Clinical training:** 8hs per week for 4 consecutive weeks

**Type of exam:** Written test at the end of the course with multiple choice questions.

**Required equipment:** None

5 ECTS

## **Psychosomatic Medicine and Psychotherapy**

(only in combination with psychiatrics)

### **Aims and contents:**

In this subject, students learn about the relationships between somatic diseases and psychosocial variables of the individual patient's life, relevant diseases are for example: eating disorders, psychosomatic pain, compulsive insanity. Beside this, students are given the opportunity to interview patients in small groups in order to elaborate on the psychopathological finding. Students are supposed to present their case in front of the group in order to develop and discuss the appropriate treatment with the tutors.

**Lecture:** 1 h per week for 4 consecutive weeks (integrated in the course 'Psychiatry, Psychotherapy')

**Clinical training:** 6 hs per week for 4 consecutive weeks (integrated in the course 'Psychiatry, Psychotherapy')

**Type of exam:** Written test at the end of the course with multiple choice questions. (The final test is written in conjunction with the psychiatric examination)

**Required equipment:** None

3 ECTS

## **Urology**

### **Aims and contents:**

In this course, typical urological diseases are demonstrated to the students, including the most important benign and malignant clinical pictures, for example: urothelial carcinoma of the upper and lower urinary tract, benign and malignant renal tumours, testicular tumours, penile cancer, prostate cancer, lower urinary tract symptoms including benign prostatic obstruction, urolithiasis, incontinence, and andrology including reproduction medicine, urological trauma and infections of the urogenital tract. Furthermore, the course focuses on special urological case history, examination techniques and imaging, as well as practical demonstrations of urological therapy including conservative, medical, endoscopic and surgical procedures.

**Lecture:** 2 h per week

**Clinical training:** 4 hs per week for 5 consecutive weeks

**Type of exam:** Written test at the end of the semester with 30 multiple choice questions

**Required equipment:** Doctor's coat and stethoscope

5 ECTS

## Notes



