The European Credit Transfer System at the Medical Faculty of the University of Luebeck, Germany
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The Core Elements of ECTS

The use of ECTS is voluntary and is based on mutual trust and confidence in the academic performance of partner institutions or universities. A better transparency is provided by the

- ECTS Credits,
- transcript of records,
- learning agreement,
- ECTS Grading System and the
- Information package

The 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.

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.
ECTS Grading System

The Grading System is a common currency to measure the quality of student achievements. It provides information on the student's performance in additional to that provided by the institution's grades: it does not replace the local grade. For a comparison between the German State Examination Grading Scale and the ECTS Grades see Table 1 below.

The ECTS Grading and the German Grading

<table>
<thead>
<tr>
<th>ECTS Grading</th>
<th>Definition</th>
<th>German Grading</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent: Outstanding performance with only minor errors</td>
<td>1</td>
<td>Excellent: Outstanding performance with only minor errors</td>
</tr>
<tr>
<td>B</td>
<td>Very good: Above average standard but with some errors</td>
<td>2</td>
<td>Very good: Above average standard but with some errors</td>
</tr>
<tr>
<td>C</td>
<td>Good: Generally sound work with a number of notable errors</td>
<td>3</td>
<td>Good: Generally sound work with a number of notable errors</td>
</tr>
<tr>
<td>D</td>
<td>Satisfactory: Fair but with significant shortcomings</td>
<td>4</td>
<td>Satisfactory: Fair but with significant shortcomings</td>
</tr>
<tr>
<td>E</td>
<td>Sufficient: Performance meets the minimum criteria</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>FX</td>
<td>Fail: Some more work required before the credit can be awarded</td>
<td>5</td>
<td>Fail: Some more work required before the credit can be awarded</td>
</tr>
<tr>
<td>F</td>
<td>Fail: Insufficient in all respects</td>
<td>6</td>
<td>Fail: Insufficient in all respects</td>
</tr>
</tbody>
</table>
The University of Luebeck

The profile of the University of Luebeck is characterized by top research and academic teaching at the interface of medicine, sciences and technology. The university has a medical as well as a technical-scientific college and offers full length courses in human medicine, informatics / computer science, molecular life science, computational life science and medical engineering.

In addition to approx. 2,300 students, 160 professors and 100 private lecturers work at the university. The university clinic comprises 21 wards with a total of 1,200 beds and 15 institutes for medical theory. With almost 5,000 persons employed, the university together with the clinic belongs to the biggest employers of the Luebeck region.

Currently there are 17 institutes at the faculty of technology and sciences, among others the humanistic institute for medical and scientific history; there are courses for fundamental subjects such as mathematics and theoretical informatics and trendsetting new disciplines such as telematics as well as multimedia and interactive systems. In addition to the course in informatics from which students graduate with a master's degree and which has an excellent reputation throughout Germany, there are a number of additional subjects to choose from such as medical informatics, bioinformatics/biomathematics, electrical engineering, media informatics and robotics and automation.

In addition to the full length studies, the university offers - together with the University of Applied Sciences - a course in medical technology. In cooperation with the distance-teaching university in Hagen there is a centre for correspondence courses and further education with a wide variety of seminars to accompany and prepare the course of study. The studium generale with its series of lectures held by renowned scientists can also be accessed by all those outside the university who are interested.

There is a particularly close and efficient relationship with the neighbouring University of Applied Sciences in Luebeck (Fachhochschule Luebeck). Together with the University of Applied Sciences and the University of Music in Luebeck the University of Luebeck organizes university open days, where students, potential students and the public are given the opportunity to obtain information concerning the courses and the profile of Luebeck's institutions of higher education. Science congresses at Luebeck's music and congress hall have become an important economic factor for the Hanseatic City.

The University of Luebeck has carried its name since 2002. It was founded as the Medical Academy of Luebeck in 1964. Scientifically, there are strong bonds with the Medical Laser Centre Luebeck and the Research Centre Borstel (Centre for Medical and Bio Sciences). There are partnerships with universities in Bergen/Norway, Hangzhou/China, Budapest/Hungary, Tartu /Estonia and Chernivtsy/Ukraine.
Concerning research the University Luebeck places particular emphasis on the special research fields of the DFG (German research association), the "Molecular Mechanisms of Inflammable and Degenerative Processes" and "Glycostructures in Biosystems - Description and Effect". In addition, there is a clinical research group for "Neuroendocrinology" which deals with current issues of hormone research. Furthermore, the university participates in the planning of a science and technology centre (Wissenschafts- und Technologiepark WTP) for an intensive exchange between the university and young entrepreneurs.

Addresses

International Office

All information concerning the application process and enrolment can be found on the Internet: www.uni-luebeck.de/studium/internationaloffice.php

International Office
Ratzeburger Allee 160
23538 Luebeck
Phone: 0049-451-500-3012
Fax: 0049-451-500-3016
E-Mail: maass@zuv.uni-luebeck.de

Deanship for Student Affairs

All information concerning the curriculum can be found in the Internet: www.medizin.uni-luebeck.de

Deanship for Student Affairs
Ratzeburger Allee 160
23538 Luebeck
Phone: 0049-451-500-6710
Fax: 0049-451-500-4299
E-Mail: susanne.reinke@medizin.uni-luebeck.de
Medical Studies in Germany

The 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
- Macrosopic 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
- Geriatrics
- Gynaecology and Obstetrics
- Health Economics, Health System, Preventive Health Care
- History, Theory, Ethics of Medicine
- Human Genetics
- Hygiene, Microbiology, Virology
- Image Processing Methods, Radiotherapy, Radiation Protection
- Infectiology
- Internal Medicine
- Neurology
- Occupational Medicine, Social Medicine
- Ophthalmology
- Orthopaedics
- Otorhinolaryngology
- Paediatrics
- Pathology
- Pharmacology, Toxicology
- Prevention, Health Planning
- Psychiatry, Psychotherapy
- Psychosomatic Medicine and Psychotherapy
- Surgery
- Urology

2b.) The Practical Year consists of 48 weeks of practical training on the wards divided into

- 16 weeks in Internal Medicine
- 16 weeks in Surgery
- 16 weeks in an elective subject

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 second examination will be taken after the Practical Year
The Clinical Studies

Anaesthesiology

Aims and contents:
At the end of the term, students should have acquired knowledge about the role and responsibility of an anaesthesiologist; furthermore they should understand the development of a general anaesthesia including the principals of basal narcoses, anaesthetic risks, stages of general anaesthesia and premedication. In the same way understanding of technical devices, e.g. using an anaesthesia mask, anaesthesia tube and anaesthesia system, is one of the most important aims of this teaching unit.

Lecture: 1h per week

Course: 2 weeks course per term

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 (Students spend most of the time in the operating theatre)

ECTS credits: 6
The Clinical Studies

Block Practical, General Medicine

**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 one week per term.

**Lecture:** 2 hs per week

**Course:** 1 week per term. 2 hs of seminar in addition.

**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 credits:** 7
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

Course: 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

ECTS credits: 8
Block Practical, Internal Medicine

Aims and contents:
In the main lecture students will learn in great detail about internal medicine; themes in the winter semester are: endocrinology, metabolism, immunology, rheumatology, geriatrics and angiology, psychosomatic medicine and psychotherapy, nephrology and hypertension. Themes in the summer semester are: pulmonology, cardiology, haemostaseology, haematology and oncology. In the practical part, students will learn about the diagnosis and treatment of diseases of internal medicine by bedside teaching.

Lecture: 4 lectures per week for two terms (winter and summer)

Course: 3 weeks course per term

Type of exam: Oral test at the beginning and written test at the end of the summer term

Required equipment: Students should be equipped with stethoscopes and white coats in order to examine patients appropriately

ECTS credits: 16
The Clinical Studies

Block Practical, Paediatrics

Aims and contents:
Students will learn everything about theoretical and basic clinical knowledge in paediatrics. Teaching units are: acute medicine, neonatology, psychosomatics and psychotherapy, neuro-paediatrics, paediatric endocrinology and diabetes, social paediatrics, paediatric haematology, oncology and immunology, gastroenterology, pulmology and allergology. In the courses, students are sent to the paediatric ward 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 patients who often are not able to express their feelings about the pain exactly. Sometimes they are so small that they are not yet able to speak. Because of that students have to find other solutions and suggestions to help them.

Lecture: 2 hs lecture per week

Course: 2 weeks course per term

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 term

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

ECTS credits: 8
The Clinical Studies

Block Practical, Surgery

Aims and contents:
Students learn the whole field of basic and specific surgery. The main lecture covers in detail general and abdominal surgery, vascular surgery, trauma and plastic surgery, cardiac surgery (winter semester). The topics in the summer semester are: surgery of the endocrine system (thyroid, parathyroid and adrenal glands), transplantation surgery and another part of cardiac surgery. During the course, which is held in different departments of the surgical ward, students become familiar with specific diseases via bedside teaching. They will interview and examine patients and discuss differential diagnoses of these diseases. Furthermore, they are given the opportunity to observe operations or to take part in a special course where different suture techniques can be learned. This course is offered by the Plastic Surgery Department. Here the students become acquainted with different suture techniques and they are informed about special suture materials.

Lecture: 3 hs lecture per week

Course: 2 weeks course per term

Type of exam: One short initial test at the beginning of the 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

ECTS credits: 14
Clinical Chemistry, Laboratory Diagnostics

Aims and contents:
Students will acquire knowledge about laboratory requirements and assess
laboratory findings. When the teaching unit has finished, they should be able to
interpret laboratory findings in a clinical way; furthermore, students must be able
to apply their acquired knowledge in every clinical discipline.

Lecture: 2 hs per week, summer term only

Course: 2 hs per week, summer term only

Type of exam: Final test with multiple choice and marks

Required equipment: None

ECTS credits: 6
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.

**Lectures:** Included in the practical course

**Courses:** 2 weeks daily at the beginning of the term, winter term only

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

**ECTS credits:** 6
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. 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

Course: 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

ECTS credits: 4
Clinical Pharmacology, Pharmacotherapy

Aims and contents:
Students learn about special prescriptions in pharmacotherapy according to special diseases which are shown to the audience. The background of pharmacotherapy as well as side-effects and interactions are discussed in depth. Furthermore, students are given detailed information about different therapeutic considerations and special treatments according to specific diseases.

Lecture: 2 hs per week

Course: Included in the main lecture

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

Required equipment: None

ECTS credits: 4
Dermatology, Venerology

Aims and contents: Students are introduced to the whole field of dermatology and venerology, for example: typical or important dermatoses and skin tumours, allergology and dermatopathology, phototherapy, methods in skin physiology, dermatomycology. Furthermore students learn the basics of dermatological nomenclature, description of skin lesions, etiology, clinical picture, differential diagnosis, therapy and diagnosis of different diseases.

Lecture: 3 hs per week

Course: 5 hs per week for 5 consecutive weeks

Type of exam: Short initial test at the beginning of the course and final test at the end of the semester with multiple choice and text questions.

Required equipment: Doctor’s coat

ECTS credits: 6
Elective Subject

**Aims and contents:**
Students should choose one of the subjects offered for them. They can coordinate their choice to suit the profession aimed for. For example, if they want to work in general medicine, they are allowed to choose a subject which deals with alternative methods which can be necessary in dealing with patients; in this case they should learn something about natural medicine or acupuncture.

**Lectures:** Average of 2 hs per week

**Practical course:** This depends on the description of the teaching unit and can be found out at the beginning of the course, normally in the introduction unit.

**Type of exam:** The type of exam also depends on different facts, a few of which are named in the preceding paragraph and which can also be established in the introduction unit.

**ECTS credits:** None
Emergency Medicine

Aims and contents:
Procurement of knowledge about techniques and procedures of emergency medicine. Students learn life-saving measures, artificial respiration and intubation on the dummy (the anaesthesiology ward in Lübeck possesses a doll named L.A.R.S.: Lübecks Anaesthesia and Resuscitation Simulator; with this doll, students are able to simulate acute emergencies) Recognizing dysrhythmia and accordingly, remedies and electrical therapy, remedies in emergency cases, techniques of storage, paediatric, gynaecological and neurosurgical particularities in emergency cases.

Lecture: 10 hs per term (5 x 2hs)

Practical course: Included in the lecture

Type of exam: Final test with multiple choice and text questions

Required equipment: None

ECTS credits: 3
Epidemiology, Medical Biometrics and Medical Computer Science

Aims and contents:
Students should comprehend statistical evaluations of clinical studies and be able to perform these themselves to some extent. Furthermore, the basics of evidence-based medicine are presented. In Medical Computer Science students have the opportunity to gain a detailed overview of concepts, methods and applications of medical computer science. In order to deepen the student’s knowledge information is provided about: structure and description of algorithms, different types of programming languages, data representation methods, description of hardware and software components, concepts and structures of hospital information systems, computer-based documentation, processing of medical images and aspects of telemedicine.

Lectures: Epidemiology: 2 hs per week / Medical Computer Science: 2 hs per week

Courses: Medical Biometrics: 1 week / Social Medicine including Epidemiology: 2 weeks per term

Type of exam: Written exam at the end of the course with multiple choice and text questions.

Required equipment: None

ECTS credits: Epidemiology: 1 / Medical Biometrics: 5 / Medical Computer Science: 2, please see Social Medicine
Forensic Medicine

Aims and contents:
Students will take part in autopsies, they will establish death certificates; furthermore: description of demarcation potential, wound morphology, field of activity of forensic medicine, judicial questions, ethics of euthanasia, basics of the medicinal law. Students are also required to present their knowledge by establishing two casuistics about different themes. They should be able to support their examination findings by means of adequate knowledge about different criteria which deal with forensic medicine. (The most important criteria are named in the last preceding paragraph.)

Lecture: 1 h per week

Course: 1 week per term

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

ECTS credits: 4
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 (maturity-onset / adult diabetes, insulin-dependent diabetes), apoplexy, hypertension, myocardial infarction, depression, neurological problems associated with alcohol abuse and so on. Some of these subjects are lectured upon in detail so that the students are able to deepen their clinical knowledge.

Lecture: Students will meet one weekend and hear something about geriatrics and diseases in connection with this subject.

Course: Included in the lecture

Type of exam: Every student has to work on an unfamiliar subject, which can be written about anything to do with geriatrics and one of the diseases often associated.

Required equipment: None

ECTS credits: 2
The Clinical Studies

**Gynaecology and Obstetrics, Internal Medicine, Paediatrics, Surgery**

**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.

**Lectures:** 2 hs per week

**Practical course:** 2 hs per week, summer term only

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

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

**ECTS credits:** 1
History, Theory, Ethics of Medicine

Aims and contents:
The students will acquire a basic knowledge of what ethics, theory and history deals with. They should be able to interpret medical texts which deal with the origins of medicine, in an adequate manner and recognize the connection between natural science and the arts. Furthermore they should analyze problems in relation to ethics and develop general suggestions.

Lecture: 1 h per week

Practical course: 2 hs per week

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

Required equipment: None

ECTS credits: 4
Human Genetics

Aims and contents:
Students will learn the whole spectrum of human genetics and the most important diseases which are associated with this teaching unit. For example, the risk of having a baby who has an illness which can be seen as a genetic defect is illustrated; or how high the probability is to become ill if parents suffer from a hereditary disease.

Lectures: 2 hs per week, summer term only

Practical course: None

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

Required equipment: None

ECTS credits: 2
Hygiene, Microbiology, Virology

Designation of the teaching unit:
Students learn the pathogenesis, diagnosis and therapy of inflammatory diseases. Furthermore, they should acquire knowledge about problems with hygiene in hospitals. It is important for the students to learn how to develop their own solutions for hygiene problems in the everyday life in hospitals.

Aims and contents:
Students should be able to recognize the structure, function and pathogenesis of the most important human-pathological germs. They will learn about the etiology, diagnosis and therapy of inflammatory diseases, and furthermore, how to prevent them. Assessment of microbiological-hygiene laboratory findings. Another exercise could be drawing up a list of 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 of their own in medical literature and present their solutions and suggestions at the end of the course.

Lectures: 4 hs per week

Practical course: 3 hs per week

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

Required equipment: None

ECTS credits: 13
The Clinical Studies

Image Processing Methods, Radiotherapy, Radiation Protection

Aims and contents:
The fundamentals of the techniques in radiology and indications for examinations with x-rays, radiation protection. Students will learn indications for image processing methods; furthermore: what can be appraised with an x-ray examination? They will see how different diseases can be recognized, e.g. pneumonia or heart diseases. Of great importance is the interpretation of an abdominal survey radiography in order to diagnose a surgical abdomen. The techniques offered in this case are conventional x-ray examinations, MRT or spiral CT.

Lectures: 1 h lecture per week

Practical course: 2 hs course per week

Type of exam: Final test with multiple-choice and text questions

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

ECTS credits: 5
The Clinical Studies

Infectiology

**Aims and contents:** In this subject students get to know the adjusted knowledge about microbiology, virology and immunology. Different diseases are discussed in depth in front of the audience. In cooperation with many physicians, an interactive lecture develops, where students have the opportunity to ask questions and to form hypotheses. Subjects which are examined are, for example: diseases of the gastrointestinal tract, liver and lung, dermatoses, diseases which are connected with fever and even oriental diseases can be taken into consideration. At the end of the course, students should be able to surmise a possible illness and propose an appropriate treatment for sick patients.

**Lecture:** 2 hs per week

**Course:** Included in the lecture

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

**ECTS credits:** 2
The Clinical Studies

**Surgery, Gynaecology and Obstetrics, Internal Medicine, Paediatrics**

**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 cannula and accomplish blood collections.

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

**Practical course:** 2 hs per week, winter term only

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

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

**ECTS credits:** 5
Neurology

Aims and contents:
Students learn the basics of neurology. Most of the course and lecture deal with neurological diseases in detail, but a small part is devoted to the neuro-surgical department. (4 weeks) In every part students will examine patients and explore their illnesses by using the knowledge provided in the lectures. Important themes will be: multiple sclerosis, neuroanatomy of brain and spinal cord, tumours of brain and spinal cord, intervertebral disc degeneration, craniocerebral trauma, skull-base fractures, meningitis, cranial nerves and the clinical syndrome, if a paralysis of these nerves exists, blood circulation in the brain and the most important arteries. Neurology is a very broad subject and the students should study parallel to the courses in order to pass the examination at the end of the teaching unit.

Lecture: 2 hs per week

Course: 2 hs per week

Type of exam: Written test at the end of the semester, no multiple choice, only text questions in the form of short essays.

Required equipment: Students should use a doctor’s coat, stethoscope, reflex-hammer and small lamps in order to identify anisocoria. With these items they will be able to examine the patients appropriately.

ECTS credits: 7
The Clinical Studies

Occupational Medicine

Aims and contents:
Students will learn the basics of occupational diseases, the main topics deal with prevention of these. They will become familiar with the law concerning occupational safety, assignments of an occupational physician. Furthermore they will have the opportunity to visit a company in order to recognize faults in the occupational safety on site. Students will learn the legal basics of preventive examinations, diagnosis and differential diagnosis of occupational diseases, and of course, how to deal with a disease, which is suspected of being the aftereffect of a particular profession. The other themes which are named in the preceding paragraph are included in social and occupational medicine. Students will get to know a small number amount of them alongside the main lecture and courses.

Lecture: 1 h per week

Course: The course is included in the main lecture

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

Required equipment: None

ECTS credits: 1
The Clinical Studies

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

**Course:** 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

**ECTS credits:** 6
The Clinical Studies

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 who has an orthopaedic problem. This can be done well by means of the physical examination and history-taking in orthopaedic patients. In order to introduce the students into this term information is given about: manual medicine, scientific work in the field of orthopaedic surgery, biomaterials and biomechanics, patient rounds for teaching purposes, sport orthopaedics as well as self-examination within the student’s group.

**Lecture:** 1 h per week

**Course:** 5 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, angle meter, reflex hammer

**ECTS credits:** 2
**Ear, nose and throat medicine (Otorhinolaryngology)**

**Aims and contents:** This subject covers the whole field of otorhinolaryngology and plastic head and neck surgery. Students become familiar with the basics of operations, otoneurology, phoniatrics, pediaudiology and ultrasound. Furthermore they have the opportunity to repeat and practise the skills of history-taking and clinical examination as well as using typical instruments in order to become confident in the adequate treatment of sick people. Lecture and course illuminate the typical methods of clinical examination of diseases in the field of otorhinolaryngology as well as plastic head and neck surgery.

**Lecture:** 2 hours per week

**Course:** 3 hs per week for 5 consecutive weeks

**Type of exam:** Written test at the end of the course

**Required equipment:** Doctor’s coat

**ECTS credits:** 4
The Clinical Studies

Surgery, Gynaecology and Obstetrics, Internal Medicine, Paediatrics

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 cannula and accomplish blood collections.

Lectures: 2 hs per week

Practical course: 2 hs per week, summer term only

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

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

ECTS credits: 2
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.

Lecture: 2 hs lecture per week

Practical course: 2 h course every other week

Type of exam: Final test at the end of the semester with multiple choice and text questions. Furthermore the students shall compile knowledge about connections between diseases and morphologic equivalents in order to present the result of their research in front of other students to show that they are confident and knowledgeable in dealing with complex pathological cases.

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

ECTS credits: 6
Pharmacology, Toxicology

Aims and contents:
Students will learn basics about effective doses and side effects of drugs and remedies, they learn how to deal with intoxications and acute emergencies. The descriptions of these remedies can be imparted to the listeners in a very detailed manner, among other things by using a lot of examples. In the following, a short summary is given of what is taken into consideration: General pharmacology and toxicology psychotropics (anti-psychotic drugs), remedies for hypertension, remedies appropriate for diseases of the heart, brain, liver, lung, bones. This is only a short extract of the themes which are discussed in depth in order to illuminate the background of pharmacotherapy and special treatments.

Lectures: 2 hs per week

Practical course: 2 hs per week

Required equipment: None

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

ECTS credits: 12
Social Medicine

(this complex includes: health economics, the health system, preventive health care; prevention and health planning; rehabilitation, physical medicine, treatment with natural remedies)

Aims and contents:
Students are introduced to social medicine and epidemiology: principles and methodology of research in epidemiology are taught, furthermore prevention and diagnosis (screening); risk assessment, efficacy of therapeutic interventions (evaluation of medical and economic outcomes), and consequences of diseases.

Lecture: 2 hs per week

Course: 2 weeks per term

Type of exam: No written test, but short oral test at the beginning of the course; here the students are required to give a brief presentation of their preparatory studies.

Required equipment: None

ECTS credits: 5, please see Epidemiology
The Clinical Studies

Psychiatry, Psychotherapy

**Aims and contents:** Students become familiar with the most important aspects of psychiatric disorders, relevant biological and psychological findings and theories. The focus is placed 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:** Included in the course

**Course:** 4 weeks at the beginning of the term

**Type of exam:** Written test at the end of the course with multiple choice and text questions. Furthermore they are required to write a short essay about an acute clinical situation concerning the most important facts, such as the current psychopathological situation, individual psychiatric history, and personal development of social, psychological and biological levels.

**Required equipment:** None

**ECTS credits:** 5
Psychosomatic Medicine and Psychotherapy

**Aims and contents:** In this subject, students learn about the relationships between somatic diseases and psychosocial variables of the individual patient’s life. Some diseases which can be considered are: eating disorders, psychosomatic pain, depression (major and minor), compulsive insanity (...). Students who learn very quickly will become aware that patients’ behaviour when ill depends on personality, family, environmental aspects, profession and occupational status. Beside this, students are given the opportunity to interview patients in small groups in order to elaborate on the psychopathological finding. After that one student has to introduce the case in front of the whole group. The subsequent treatment will be discussed with the tutors.

**Lecture:** Included in the course

**Course:** 1 week per term integrated in the course ‘Psychiatry, Psychotherapy’

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

**Required equipment:** None

**ECTS credits:** 1
The Clinical Studies

Gynaecology and Obstetrics, Internal Medicine, Paediatrics, Surgery

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 cannula and accomplish blood collections.

Lectures: 2 hs per week, winter term only

Practical course: 2 hs per week, winter term only

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

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

ECTS credits: 5
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, penis carcinoma, prostate cancer, adenoma of the prostate, renal calculus and andrology including reproduction medicine, diagnosis and therapy of infections of the urogenital tract. Furthermore, detail is given on the special urological case history, examination techniques, as well as practical demonstrations of urological therapy and operation procedures.

Lecture: 1 h per week

Course: 5 hs per week for 5 consecutive weeks

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

Required equipment: Doctor’s coat and stethoscope

ECTS credits: 4