Contents of Teaching – TUM Clinical work
TUM School of Medicine and Health

EF0001 Familiy Medicine

Credits:
5

Hands-on Seminar in Family Medicine (3 ECTS)
Lecturer:
Prof. Antonius Schneider and physician lecturers of the institute
Contact persons and main instructors:
Dr. Bernhard Riedl, Alexey Fomenko, Dr. Florian Vorderwülbecke
Academic Year
2nd clinical year
Teaching structure
Hands-on Seminar (3 x 3,5h per term on Wednesdays)
Small groups of 8-12 students instructed by 1-2 physician lecturers
Teaching material available on MEDITUM platform
Concept of Hands-on Seminar in Family Medicine
Experienced physician lecturers will comment on frequent medical complaints and picture the general practitioner's daily routine. The hands-on seminar is intended to focus on practical skills (like subcutaneous infusions, basic geriatric assessment). Furthermore the students are supposed to understand the line of action in family medicine (red flags vs. test of time).
The students will be able to transfer their basic skills into practice within the scope of the subsequent 3rd clinical year (practical training in a general practice)
Contents of teaching:
Seminar 1: Acute and chronic diseases, chest pain, diabetes, common cold and shortness of breath
Seminar 2: Preventive medicine, back pain, addiction, quaternary prevention
Seminar 3: Special situations, multidrug therapy, geriatric patients, palliative care medicine
Learning objectives on different levels:
Dimension:
1. Knowledge
2. Skills
3. Identification
Level of competency:
1. Factual knowledge
2. Practical knowledge
3. Decision making and responsibility
Requirement for successful completion

- Attendance record for seminar
- Written examination (multiple choice, 20 question, 30min)

Course Basic Clinical Skills including OSCE (2 ECTS)

EF0003 Occupational and Social Medicine

Credits:
3

Institut und Poliklinik für Arbeits-, Sozial- und Umweltmedizin, Ludwig-Maximilians-Universität München
Direktor: Prof. Dr. med. Dennis Nowak
CATALOGUE OF LEARNING OBJECTIVES IN OCCUPATIONAL AND SOCIAL MEDICINE (as of June 2021)
Basics of occupational safety and health for medical practice
• Concept of stress and strain
• Legal foundations of occupational health and safety in Germany
• Industrial physicians' tasks: work anamnesis and risk assessment
• Hierarchy of occupational health and safety measures
• Definition and legal treatment of occupational accident and disease
• Reporting obligation for suspected occupational disease
• Similarities and differences of occupational and environmental medicine
• Foundation of ethical implications regarding the interaction of work and health
Occupational medicine in health services
• risk assessment health service
• blood-borne infectious diseases
• needlestick injuries
• aerogen infectious diseases
• occupational health and safety measures
• occupational medical precautions in health services
• vaccine indications
• skin exposure in health services
• maternity protection
Work-related respiratory diseases
• Basics of pulmonary function testing
• Allergic respiratory diseases
• Irritant-toxic respiratory diseases
• Diagnosis of occupational asthma
• Risk factors and prognosis of occupational asthma
• chronic obstructive bronchitis or emphysema by occupational exposure
Noise at the workplace
• Effect of noise on the human ear
• Measurement of noise
• Noise reduction and prevention
• Ear protection
• Noise-induced hearing loss as occupational disease
• extra-auditory effects of noise on humans
Chemistry at the workplace
• Biomonitoring
• Evaluation of measured values
• Reference values
• occupational exposure limit values
• heavy metals (lead, mercury, et al.)
• organic substances (benzene, hexane, PCB, polycyclic aromatic hydrocarbons,

aromatic amines, et al.)
• carcinogenic substances
Work-related skin diseases
• UV exposure
• Chemical skin damage
• travel dermatology
• allergy diagnostics
• skin eczema, dermatologist procedures
Work-related cancers
• pulmonary carcinogens
• occupational diseases caused by silicogenic dust
• occupational diseases caused by asbestos dust
• occupational cancer diseases of the upper respiratory tract, the haematopoietic system, the urinary and other organ systems
Psychosocial stress and strain at the workplace
• Concept of stress and strain in the psychosocial context
• Individual and structural prevention
• Psychological work characteristics
• Demand-centred models (e.g. job-characteristics-model, complete activities)
• Resource-centred models (e.g. demand-control-model, effort-reward-imbalance, social support)
• Stress-centred models (e.g. regulation hindrances, work interruptions)
• Effects of working conditions on psychological and physical health and performance
• Specific conditions and consequences: leadership, burnout
• Harassment at the workplace
Physically caused occupational diseases
• Vibration, shock (circulatory disturbances, degenerative joint diseases)
• lifting and carrying of heavy loads (intervertebral disc)
• pressure (meniscus, bursa, nerves)
• mechanical strain (tendon sheath, carpal tunnel syndrome)
• gonarthrosis as occupational disease
• musicians dystonia
• ergonomic workplace design
• diseases caused by work in pressurized air
• diseases caused by ionising radiation
Antibiotic resistance
• Intake of antibiotics and antibiotic resistance
• Antibiotic resistance in the environment and at workplaces
• Antibiotic resistance in wastewater
• Study designs used to assess antibiotic resistance
Social Medicine
• social security system in Germany
• key concepts of the welfare state
• basics of rehabilitation
• statutory rehabilitation authorities
• workforce participation benefits
• informal work
• occupational accidents
• ICF: International Classification of Functioning, Disability and Health

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EF0004 Ophtalmology

Credits:
4,5

Lecture (28 hours) + 2 days internship + written examination
basic features of embryology, anatomy and physiology of the eye and adnexa, physiology and pathology of conjunctiva, lids and lacrimal system
basic features of ocular optics, basic features of ocular examination
diseases of cornea: physiology of transparency, inflammation and degeneratives changes, corneal transplantation
diseases of lens: especially cataract and its operation
diseases of the uvea: inflammation and tumors
diseases of the retina: retinal detachment, tumors, diabetic
retinopathy, vascular diseases, age related macular degeneration
glaucoma: open angle, narrow angle, secondary glaucoma, diagnosis and therapy
the eye in general disease
diseases of the optic disc and the optic nerv: vascular diseases, inflammation
diseases of the visual pathway, visual field changes
neuroophtalmology, ocular motility and strabism
diseases of the orbit: inflammation, tumors
ocular trauma: contusion, perforation

EF0006 Dermatology

Credits:
5

Not available

EF0007 Gynaecology and Obstetrics

Credits:
4,5

Contact person and teaching coordinator:
Dr. med. Evelyn Klein (evelyn.klein@tum.de)
PD Dr. Bettina Kuschel (bettina.kuschel@mri.tum.de)
Markus Tarrach (markus.tarrach@tum.de)
Lectures:
1. Main lecture (12x 1.5 hours) and seminar (5x 1.5 hours) in the 2nd second academic year (4.5 ECTS)
2. Practical training (Blockpraktikum) obligatory for 1 week in the 3rd academic year (2 ECTS)
1. Lecture contents:
Emergencies in Gynaecology and Obstetrics
Course of pregnancy, prenatal diagnosis, prenatal care
The normal delivery
The irregular delivery
Emergencies in Obstectrics
Ectopic pregnancy
Miscarriage and termination of pregnancy
Hypertensive disorders of pregnancy
Diabetes in pregnancy
Benign tumors: myomas, polyps
Dysfunction of the pelvic floor and bladder, Urogynecology

Breast cancer
Ovarian cancer
Vulvar cancer and Trophoblastic tumor
Cervical and Endometrial cancer
2. Seminar contents:
Infections in Gynaecology and Obstetrics
Prenatal diagnosis, Prenatal care
Menstrual cycle, phases of woman´s life, contraception
Endometriosis and sterility
Radiotherapy
3. Practical training (Blockpraktikum) - Concept & Contents
1 week, full-time, structured training providing insight into the work at the department of Gynaecology and Obstetrics. Different areas such as the wards, theatre, labor rooms, etc. will be visited. In addition practical courses with hands-on exercises e.g. in gynaecological examination and mechanics of childbirth will be given. Caution! All of the practical trainings (Blockpraktika) (e.g. Gynaecology, Pediatrics, Internal Medicine, Surgery, etc.) take place in the first and last 3 weeks of each semester (this is a regular event at the end of the 3rd academic year. Overlaps with disciplines form the 1st and 2nd academic year can occur.
Exams:
1. Written exam after the main lecture and the seminars - 40 case-related MC-questions
(pass mark 60%), repeat test at the next semester possible
2. OSCE at the end of the practical training (Blockpraktikum) (pass mark 60**%)**

EF0008 Otolaryngology

Credits:
4,5

Not available

EF0011 Internal Medicine

Credits:
16

Lectures:
• Interdisciplinary lecture 1 (IVL 1) (only winter term)
• Interdisciplinary lecture 2.1 (IVL 2.1) (only in summer term)
• Interdisciplinary lecture 2.2 (IVL 2.2) (only in winter term)
• Interdisciplinary lecture 2.3 (IVL 2.3) (only in summer term)
• Interdisciplinary lecture 3 (IVL 3) (winter and summer term)
Internal Medicine is a topic in all of them, but the most important ones for Internal Medicine are IVL 2.1 and IVL 2.2.
The lessons of IVL 21 and 2.2 also contain surgery and specific pathology, so does the exam.
Practical Training:
- Course of Anamnesis and physical examination: „Spezielle Untersuchungstechniken Innere Medizin“
(2 x 1,5 hours). You will learn how to do a correct anamnesis and physical examination.
- Bedside teaching (7 x 3 hours, once a week)
Contents: anamnesis, physical examination and case discussions

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EF0012 Pediatrics

Credits:
6

Contact person:
Prof. Dr. med. Uta Behrends uta.behrends@mri.tum.de
Priv.- Doz. Dr. med. Hendrik Jünger hendrik.juenger@mri.tum.de
Dr. med. Katharina Warncke katharina.warncke@mri.tum.de
Christoph Dörfler, DVM christoph.doerfler@mri.tum.de
Lecture
Main class Pediatrics 1 and Pediatrics 2, each with a Final written Exam.
The subjects of the lectures of Pediatrics 1 and Pediatrics 2 are being taught parallel in two semesters, in the Winter semester and also in the Summer semester. There are approx. 44 lectures in total (22-23 lectures in Pediatrics 1 and Pediatrics 2) each lasting for 75 minutes
Themes:
Main Class Pediatrics 1:
• Introduction to Pediatrics
• Introduction to Pediatric Surgery
• Preventive medical examination for infants, children and adolescents
• Introduction to Pediatric Radiology
• Patient centered-care in the Maternity Room
• Premature infant related problems
• Connatal Infections
• Connatal malformations
• Classic childhood diseases
• Pulmonology I and II
• Allergy and Asthma
• Congenital Heart- and Angio-pathology
• Acquired Heart- and Angio-pathology
• Cardinal Symptoms in Pediatric-cardiology
• Pediatric Infecciology / Immunology
• Rheumatic Pathology
• Fever in childhood
• Swelling of lymph nodes
Main Class Pediatrics 2:
• Breastfeeding and Nutrition in the first year of life
• Abdominal pain in Children and Adolescents
• Growth and Puberty Disturbances
• Congenital Metabolism Pathologies
• Leukemia's and Lymphoma's in Childhood and Adolescence
• Extracranial solid Tumors in Childhood and Adolescence
• Social Pediatrics
• Anemia in Children and Adolescents
• Seizures in the Childhood and Adolescence
• Headaches in the Childhood and Adolescence
• Disability in the Childhood and Adolescence
• Congenital Neuromuscular Diseases
• Psychiatry in Children and Adolescents
• Braintumors in the Childhood and Adolescence
• Water-, Electrolyte- and Acid-Base-balance as also Starvation Response
• Connatal kidney diseases
• Palliative care in childhood
Exam:
75 min exam with 50 possible case-related MC-Questions after each of both Main Classes.

Repetition after 1 Semester possible, therefore an after-exam isn't provided.
The content of the Exam is the knowledge acquired during the lessons of Pediatrics
AND through self-study of one the suitable Pediatrics Learning Books.
Advised Bibliography – alphabetically organized:
• Kröner & Koletzko. Basiswissen Pädiatrie. Springer
• Lentze, Schaub, Schulte, Spranger. Pädiatrie: Grundlagen und Praxis. Springer
• Mayatepek. Pädiatrie. Urban & Fischer
• Muntau. Intensivkurs Pädiatrie. Urban & Fischer
• Sitzmann. Pädiatrie. Duale Reihe, Thieme
• Speer, Gahr. Pädiatrie. Springer
• Additional advised for interesse: Kreckmann. Fallbuch Pädiatrie. Thieme

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EF0020 Forensic Medicine

Credits:
3,5

The lecture series of forensic medicine/forensic pathology deals specifically with those medico-legal procedures pertaining to the dead, though some of the principles of examination and findings may be similar to those in the living, e.g. description of wounds, genital findings in rape etc.
The overall aims of this lecture series are to provide students with an overview of basic forensic (medico-legal) procedures that will enable them to perform and interpret coroner's autopsies and help the police in their investigations and legal disposition of these cases.
<u>In detail following topics are addressed:</u>
1. Introduction into forensic medicine. Early post-mortem changes (90 min).
2. Late post-mortem changes (90 min).
3. Verification and certification of death. Estimation of the time of death. Identification of the deceased (90 min).
4. Vital reactions. Performing autopsies to determine the cause of death (90 min)..
5. Sharp force trauma (90 min).
6. Blunt force trauma. Transport-related trauma. Forensic Neuropathology (90 min).
7. Pressure on the neck & asphyxia, Special Forms.: Hanging, Strangulation, Suffocation, Drowning (90 min).
8. Forensic Toxicology (90 min).
9. Forensic DNA-Analysis (90 min).
10. Forensic aspects of fire, burns & electricity (90 min).
11. Firearms, ballistics & gunshot wounds (90 min).
12. Medical malpractice: communication, consent, confidentiality, record keeping, statement and report writing (90 min)..
<u>Forensic medical exam</u> (30 questions, 60 min)
Additionally, you have to pass 1 practical course called "Leichenschau" (1,5 h)

EF0023 Obligatory optional subject

Credits:
3

There are 65 obligatory optional subjects, not all course descriptions are available:
https://www.meditum.med.tum.de/de/content/lehrinhaltecontents-teaching

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EF0009 Human genetics

Credits:
3,5

Presentation:
course: 4 hours
lecture: 28 hours (offered in both WS and SS of the first clinical year)
Contact person:
PD Dr. Michael Zech: michael.zech@mri.tum.de Content:
Lecture
Medical genetics
Pediatric deseases I
Prenatal diagnostics
Pediatric deseases II
Cytogenetics I
Oncology-genetics I
Neuro-genetics I
Neuro-genetics II
Oncology-genetics II
Psychiatric-genetics
Neuro-genetics III
Mitochondrial deseases
Key words lecture:
genetics consultancy – molecular diagnostics – gene-expression – genomproject – history of human genetics – genemapping – gene-expression – mitochondrial genetics – monogene diseases – genetics of common diseases – mechanism of mutation – population genetics – risks – syndromology – cytogenetics – trinucleotid-diseases – prenatal diagnostics
Course:
consolidation and repetition of the contents of the lecture
Examination:
Multiple choice – questions, at the end of every semester

EF0010 Microbiology, Virology, Hygiene

Credits:
6

Contact person:
PD Dr. med. Clarissa Prazeres da Costa
Dr. med. Michael Neuenhahn
Dr.med. Dieter Hoffmann

The course runs for one semester in the first clinical year and spreads over 13 weeks of teaching/examination/introduction/holidays.
Structure (changes are possible):
• Lectures Microbiology, Hygiene, Virology, Parasitology. Four hours per week (38 total)
Topics covered:
Microbiology (general bacteriology, gram positive cocci, Enterobacteriaceae, gastrointestinal infections, pneumonia (agents and disease), anaerobic bacteria, pathogenic fungi, meningitis (agents and disease), Mycobacteria, sprirochetes, STD.
Hygiene (mechanisms and development of antibiotic resistance, hygiene, hospital acquired infection)
Virology (this is taught by the Institute for Virology as a part of our course

Parasitology (classification of parasites, protozoa (Plasmodium, Trypanosoma, Amoeba, Leishmania, Toxoplasma), metazoan (selected nematodes, trematodes and cestodes)
• Lectures Immunology (9 hours total)
Topics covered: Cells, organs, receptors; innate immunity, danger; B cells, antibodies; T cells, MHC, antigen presentation, thymic maturation; cytokines; memory; defence against microbes; vaccination; immunodeficiency, transplantation ; immunopathology.
• Practical course/laboratory classes (four hours per week, 40 hours total)
Topics covered: Microscopy, bacterial culture; diagnostics of bacterial species; urinary tract infection; pneumonia, PCR; antibiotics resistance; diagnostics of bacterial dysentery; hygiene and disinfection; immunological methods; blood groups; pathogenic fungi; anaerobic bacteria; clinical cases; virology (see above); protozoa (demonstration, microscopy); metazoa (demonstration, microscopy of worm eggs).
Examination:
Written, 45 minutes, usually 30 questions (multiple choice)

EF0013 Clinical Chemistry

Credits:
6

Courses: (winter and summer semester)
Lecture : 28 hours
Practical course: 36 hours
Contact person:
Dr. Winter (christof.winter@tum.de)
Content:
Topics of lecture and practical course:
• Clinical and chemical diagnostics of the liver: metabolic parameters, photometry
• Diagnostics of acute coronary syndromes: CK, myoglobin, troponin
• Lipid metabolism: biochemical principles, disorder in metabolism, therapy goals, determination of cholesterol, HDL, LDL, TG
• Hematology I: blood count, clinical relevance, anemia, polycythemia, thrombozytopenia, cell count, blood slide
• Hematology II: differential blood count, clinical significance of the subpopulations, leukemia, myelodysplastic syndrome, lymphomas, blood slide, staining, differentiation
• Immunology and protein chemistry: immunoassay-methods, biochemistry und disorder of serum proteines, elektrophoresis
• Endokrinology und analytics of steroid hormones: physiology of the sexual hormones, estradiol and testosterone, determination with immunoassay
• Hemostaseology I: physiology, anticoagulation, quick-test, INR, aPTT
• Hemostaseology II: factor XIII analysis, primary hemostasis and bleeding time, antithrombin-determination, diagnostics of thrombophilia, factor V Leiden (APC- resistance) und APC-sensitivity-test (APC-ratio)
• Kidney, elektrolytes und proteinuria-diagnostics: principles and clinical meaning, urine strips, protein und creatinin determination in the urine
• Diabetes mellitus: blood glucose, oGTT, HbA1c-test, creatinin determination, determination of glucose level and ketone bodies in the urine
• Principles of laboratory diagnostics and quality control: indications, reference range, sensitivity and specificity, accuracy, standardisation and guidelines
Practical course - organisation:
3 hours per week
Test at the beginning of every course: has to be prepared with the script
repetition of the theory
control of success (result paper has to be handed in)
examination:

there is no general final exam, the final mark consists of the results of all the tests and the course protocols, in case of failure in a certain range of points, there will be an oral exam.

EF0016 Pathology

Credits:
10

Not available

EF0017 Pharmakology, Toxikology

Credits:
7

Contact person:
Dr. Bernhard Laggerbauer: bernhard.laggerbauer@tum.de

Courses
in the first clinical year: four week course (lecture and seminar), ONLY in january/february,
Lecture: 40 hours (compulsory attendance! Will be checked 4 times with a list of signatures), 2 hours every morning (daily)
Seminar: 16 hours, once a week in the afternoon, no authorised absence!
Lecture-topics:
• General Pharmacology
• Pharmacokinetics, Pharmacogenetics
• Parasympathetic Nervous System
• Anesthesia, Muscle Relaxants
• Sympathetic Nervous System I and II
• Stomach / Intestine
• Opiates
• Addiction
• Antipsychotics (Neuroleptics)
• Parkinson Disease/ Epilepsy
• Diabetes Mellitus
• Calcium Metabolism / Thyroid
• Sex hormones
• Antibiotics I and II
• Anti-Viral Medication / Antimycotics
• Antituberculotics / Anti-Malaria Drugs
• Immunosuppressants
• Chemotherapeutics
Seminar-topics:
• Glucocorticoids, NSAID, Coxibes, TNFα
• Antidepressants, Sedatives, Alzheimer's Disease
• Coronary Heart Disease: Statins, Coagulation, Nitrates, Beta-Blockers
• Circulation: Diuretics, ACE Inhibitors, Calcium Channel Blocker, Heart Insufficiency, BNP
exam
At the end of the four-weeks course, 50 multiple-choise questions.

EF0014 Neurologie

Credits:
6

Not available

EF0018 Psychiatry

Credits:
5

Contact person:
Herr Dr. Max Burger: max.burger@mri.tum.de,
Stellvertr: Herr Dr. Oliver Goldhardt: oliver.goldhardt@tum.de
Sekretariat Lehre: Frau Christina Glombik: Christina.Glombik@mri.tum.de

Main Lecture:
- Affective Disorders
- Delirium (Mental Confusion)
- Dementia/Alzheimer's Disease
- Addiction/Substance Abuses
- Schizophrenia
- Sleep Disorders
- Anxiety/Compulsion Disorders/
- Personality Disorders
- Morbid Obesity/Eating Disorders
- Mental Deficiencies/Autism
- Depression/Mania
- Psychiatry and Movies

Written Exam
30 Multiple choice questions
One written clinical case report
Practical Five Day Course (40 hours)
The student is on a 5-day practical course under the supervision of a senior doctor in the daily ward routine work, visiting rounds and has to hand in a written case report of one patient at the end of the course.
In addition the students attend courses in:
- Neuropsychology
- Neuro-psychiatric differential diagnostic methods
- Social psychiatry
- Psychotherapy
- Genetics

EF0019 Psychosomatic Medicine and Psychotherapy

Credits:
4,5

Contact person:

PD Dr. Andreas Dinkel a.dinkel@tum.de
Dr. med. Christine Allwang: c.allwang@tum.de

Not available

EF0002 Anesthesiology

Credits:
4,5

Contact person:
PD Dr. Rainer Haseneder, r.haseneder@lrz.tum.de

EF0005 Surgery

Credits:
6,5

Contact person:
IVL 2.1: PD Dr. med. Isabell Bernlochner: isabell.bernlochner@mri.tum.de
IVL 2.2: Dr. med. Johannes Wießner: johannesroman.wiessner2@mri.tum.de
Praktikumstag MKG: PD Dr. med. Dr. med. dent. Lucas Ritschl: lucas.ritschl@tum.de
MTC Stationsmanagement: Kathleen Lindemann: mtc.sto@mh.tum.de

Interdisciplinary lecture 2.1 and 2.2 of the second year. The lessons take place from Monday till Friday from 10.15 a.m. to 11 a.m/11:30 a.m for one academic year (2.1 in summerterm and 2.2 in winterterm)
The exams always take place at the end of the term.
For Erasmus students it is possible to do the exam of 2.1 and 2.1 in one term but you will have to learn the subjects of the lessons that you missed in one term by pdf-files and streams of the lessons at the Meditum website.
There is no control of attendance during the lessons
Interdisciplinary lectures 2.1 and 2.2 contain also Internal Medicine and Specific pathology, so does the exam. So you can´t do only one part, you have to pass the whole exam!!!
Topics: The lessons contain all subjects of surgery: general, visceral, cardiology, trauma, …

EF0015 Orthopedics

Credits:
4

Contact person:
IVL 2.3: Prof. Dr. Rainer Burgkart: rainer.burgkart@tum.de, Fritz Seidl: fritz.seidl@tum.de
Bedside-Kurs:
Orthopädie: Dr. Florian Lenze: Florian.Lenze@mri.tum.de
Unfallchirurgie: PD Dr. Moritz Crönlein: Moritz.Croenlein@mri.tum.de
Sportorthopädie: Dr. Bastian Scheiderer: bastian.scheiderer@tum.de

Interdsiciplinary Lecture 2.3: orthopedics, traumatology,
Bedside teaching orthopedics: 2 x 3 hours:

anamnesis, physical examination and case discussion

EF0021 Urology

Credits:
3,5

Contact person:
OA Dr. Michael Autenrieth, michael.autenrieth@lrz.tum.de

Not availbale

QB0002 Cross-sectional course Medical history and Ethics

Credits:
3

Contact person:
Frau Prof. Dr. Buyx, Jennifer Wladarsch: medizinethik.med@tum.de

1. lecture of history and ethic in the first clinical year. It contends 12 hours and is tested by a written multiple choice test at the end of the semester.
The intention of the lecture is to give a review about the development of medicine from the prehistorical beginning to present. Furthermore, students have to learn about ethic conflicts in modern medicine and they have to study some ethic terms.
2. In the second clinical year, there is an ethic – seminar (4,5 hours). Themes of the tutorial are basic principles of ethic theories and one special theme, for example suicide, medically assisted suicide, forced treatments in psychiatric clinics and prenatal medicine.

QB0001 Cross-sectional course Epidemiology, Medical Biometrics and Medical Informatics

Credits:
6,5

Contact person:
Vorlesung und Seminar Biometrie: PD Dr. rer. nat. Bernhard Haller: bernhard.haller@tum.de
Vorlesung Medizinische Informatik: Dipl.Phys. Andreas Enterrottacher: andreas.enterrottacher@tum.de
Zentralübung Epidemiologie: Dipl. Stat. Birgit Waschulzik: birgit.waschulzik@tum.de

Not available

QB0011 Cross-sectional course Imaging, Radiotherapy, Rediation Protection

Credits:
6,5

Contact person:
Radiologie: Dr. Georg Feuerriegel: georg.feuerriegel@tum.de
Interventionelle Radiologie: Dr. Tobias Geith: tobias.geith@tum.de
Neuroradiologie: Dr. Dominik Sepp: dominik.sepp@tum.de oder lehre-neuro.rad.med@tum.de
Nuklearmedizin: Michael Gammel: m.gammel@tum.de
Strahlentherapie: PD Dr.med. Jan Peeken: Jan.Peeken@mri.tum.de

Not available

QB0003 Cross-sectional course Health Economics, Health System, Public Health Care

Credits:
2

Contact person:
Dr. Bernhard Riedl: bernhard.riedl@tum.de

Not available

QB0004 Cross-sectional course Infectious Diseases, Immunology

Credits:
2

Contact person:
Vorlesung: Dr. Veit Buchholz: veit.buchholz@tum.de
Praktikumstag Impfen: Frau Dr. Roggendorf (hedwig.roggendorf@tum.de)
Hygiene Basic und Advanced: Kathleen Lindemann: kathleen.lindemann@tum.de, Prof. Dr. Rainer Burgkart: rainer.burgkart@tum.de

Not available

QB0005 Cross-sectional course Clinical-Pathological Conference

Credits:
3

Contact person:
Dr. med. Alexander Muckenhuber: alexander.muckenhuber@tum.de
Organisatorisch: Claudia Walter: c.walter@tum.de

This course is focussed on gross examination of different resection specimen that are received in daily pathology practice. It is designed to teach students to describe and evaluate macroscopic findings with emphasis on differential diagnosis and possible pitfalls.

QB0006 Cross-sectional course Clinical Environmental Medicine

Credits:
3

Contact person:
Prof. Dr. Martin Göttlicher: martin.goettlicher@helmholtz-muenchen.de

Not available

QB0008 Cross-sectional course Emergency Medicine

Credits:
3

Contact person:
PD Dr. Rainer Haseneder, r.haseneder@lrz.tum.de

Lecture: 21 hours, Practical training: 12 hours

Content:
Emergency cases in internal medicine, anaesthesia, surgery and traumatology, neurology, psychiatry, paediatrics, ophthalmology, otorhinolaryngology
Theoretical education and training according to the “Guidelines 2000 for cardiopulmonary resuscitation and emergency cardiovascular care – A consensus of science”
Adult Basic life support (BLS) and advanced life support (ALS)
Advanced trauma life support (ATLS) and Paediatric Basic and Advanced life support (PALS)
In reality like conditions.
Practical exercises.
Skillstations and Full-Scale-Patientsimulators
Case reports
Performing intubation, intravenous line, interpretation of emergency-ecg,
defibrillation, administration of drugs, x-ray interpretation, Crisis
resource management.

Exam at the end of term

QB0009 Cross-sectional course Clinical Pharmacology and Pharmacotherapy

Credits:
4

Contact person:
Dr. Andrea Lang: andrea.ahles@tum.de

Lecture topics:
• Hypertension

• Coronary heart disease, Lipid-lowering medication
• Heart insufficiency, Heart rythm disorders
• Antidiabetics
• Calcium metabolism, Osteoporosis
• Thyroid hormones, Gout
• Anti-Parkinson medication, Anticonvulsants (Antiepileptic drugs)
• Psychotropic drugs, Anti-dementia drugs
• Cytostatics
• Analgetics, Antirheumatics
• Stomach / Intestin
• Therapy in pregnancy
• Adrenal gland hormones, Anti asthma medication
• Prescription
Exam: End of the winter term, 30 multiple choice questions, + prescription test (3 prescriptions have to be written)

QB0010 Cross-sectional course Prevention, Health Promotion

Credits:
2

Contact person:
Herr Dr. Mario Weichenberger: Mario.Weichenberger@mri.tum.de
Frau Michaela Kaiser: Michaela.Kaiser@mri.tum.de

Not available

QB0012 Cross-sectional course Rehabilitation, Physical Medicine, Complementary Therapeutic Procedures

Credits:
2

Contact person:
Prof. Rainer Burgkart: rainer.burgkart@tum.de

Not available

QB0013 Cross-sectional course in Palliative Care

Credits:
3

Contact persons:
Seminar ÄGF 1: PD Dr. Andreas Dinkel andreas.dinkel@mri.tum.de, Coordination: Kathleen Lindemann kathleen.lindemann@tum.de
Seminar Palliativmedizin: Prof. Dr. Johanna Anneser: j.anneser@tum.de
Internship day Palliative care: Prof. Dr. Johanna Anneser: j.anneser@tum.de

Lecture: Prof. Dr. Johanna Anneser: j.anneser@tum.de

Not available

QB0007 Cross-sectional course Medicine of Aging and the Elderly

Credits:
2

Contact person:
PD Dr. Dr. med. Alexander Zink: alexander.zink@tum.de

Not available

QB0014 Cross-sectional course Pain Medicine

Credits:
2

Contact person:
Herr Prof. Dr. Thomas Tölle: thomas.toelle@tum.de

Not available

BP0001 Fulltime practical course in small groups: Internal Medicine

Credits:
4

Contact person:
Dr. Folker Schneller: folker.schneller@tum.de

Not available

BP0002 Fulltime practical course in small groups: Surgery

Credits:
6

Contact person:
Prof. Ralf Gertler: ralf.gertler@tum.de

Not available

BP0003 Fulltime practical course in small groups: Pediatrics

Credits:
2

Contact person:
Prof. Dr. med. Uta Behrends, uta.behrends@mri.tum.de
Christoph Dörfler (TA), christoph.doerfler@mri.tum.de

Not available

BP0004 Fulltime practical course in small groups: Gynecology, Obstetrics

Credits:
2

Contact person:
Dr. med. Evelyn Klein (evelyn.klein@tum.de)
PD Dr. Bettina Kuschel (bettina.kuschel@mri.tum.de)
Markus Tarrach (markus.tarrach@tum.de)

Not available

BP0005 Blockpraktikum Allgemeinmedizin

Credits:
2

Contact:
Dr. med. Dipl. oek. Bernhard Riedl (riedl-bernhard@t-online.de)

Teaching structure
1. Introduction lecture (2,5h)
2. E-learning (2x 16 case studies, VHB – Virtual Academy of Bavaria)
3. Practical Training (9d)

Location
1. Lecture occurs in seminar rooms (called LUTZ)
2. Self-study of digital cases (VHB), E-Lecture
3. Practical training takes place in an official teaching practice

Concept of Practical Training
After participating in the introduction lecture and completion of the e-learning (case studies) the students will take part in the practical training itself. The students will be able to transfer their knowledge into practice under supervision of a general practitioner in a teaching practice for 9 days. The training is intended to focus on responsibilities of a general practitioner, interviewing patients and managing frequent medical complaints.

Contents:

Assessment and procedure in family medicine

- unselected patient collective
- frequent medical complaints
- long-term care
- biopsychosocial model

Dealing with diagnostic uncertainty

- classification
- shared decision making
- re-evaluation and safety netting
- red flags

Evidence based medicine

- official guidelines (NVL, DEGAM, AWMF etc.)

Acute medical complaints

- respiratory infections, abdominal and thoracic pain, back pain and headache, shortness of breath, fatigue and weakness, fainting and falls, basic surgical and wound care, allergic reactions and anaphylaxis, swelling of lymph nodes etc.

Long term care

- chronic diseases like diabetes, coronary artery disease, asthma /COPD (and DMP – disease management programs)
- mental and psychosomatic disorders
- pain treatment and palliative care medicine
- addiction

Long term care of the elderly

- home visits, visiting nursing homes
- dementia
- medication of the elderly
- basic geriatric assessment

Preventive Medicine

- Check-up examinations
- Vaccinations

Competency framework for family medicine experts

(CanMEDS Family Medicine)

Communicator, Collaborator, Manager, Health Advocate, Scholar, Professional

Requirement for successful completion

1. Attendance record for introduction lecture
2. Certificate of successful completion of E-learning cases (VHB)
3. Evaluation and grading by the instructor