

Opasraportti

LTK - Medicine (2009 - 2011)

DEGREE PROGRAMME IN MEDICINE 2009-2011

Admission requirements

The admission requirements for the degree programme in Medicine comprise the Matriculation Examination Certificate or the upper secondary vocational education and an entrance examination. Equivalent foreign education also give general eligibility for degree programme in medicine. Foreign applicant's admission is based exclusively on the results of the entrance examination.

All applicants to the degree programme in Medicine have to attend an entrance examination, which is held in Finnish or in Swedish and is based on Finnish or Swedish literature. If a foreign applicant wants to answer in Swedish to the entrance examination, she/he has to demonstrate language proficiency in Finnish. The teaching is given in Finnish language.

Qualification awarded

The degree programme in Medicine leads to the degree of Licentiate of Medicine (*lääketieteen lisensiaatti*), which corresponds M.D. degree in Angloamerican countries.

Educational and professional goals

The goal of the studies towards the degree of Licentiate of Medicine is to provide the students with such knowledge, skills and psycho-social abilities that will enable them, after graduation, to successfully function as experts, developers and team participants and leaders in hospitals as well as in primary health care. An additional goal is that a graduate will have the prerequisite skills for research work and post-graduate study as well as the ability and motivation for lifelong learning. The instruction, which emphasizes the regular updating of knowledge, has a strong connection to scientific research. The contents of instruction have been derived from the goals, and they are under constant evaluation and development.

Access to further studies

In Finland a student may obtain the degree of a Doctor of Medical Science (*lääketieteen tohtori*) or / and the Specialist degree in Medicine (*erikoislääkärin tutkinto*). Students can apply for doctoral studies after the completion of the higher academic degree (Licentiate of Medicine).

The degree of a Doctor of Medical Science is a postgraduate degree in medicine. The doctorate may take 3 - 4 years full time study. An accepted thesis is required as well as theoretical studies.

The Specialist degree is a professional postgraduate degree. In Finland there are 49 specialist degree programmes. The specialist education in medicine takes 5 to 6 years after permission granted by the National Supervisory Authority for Welfare and Health (*Sosiaali- ja terveysalan lupa- ja valvontavirasto, Valvira*) to practice as a physician in Finland. It consists of theoretical lectures, working in hospitals and health centers and an examination.

For more information on postgraduate studies at the Faculty of Medicine contact:

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Structure of the degree programme

The minimum extent of the Licentiate of Medicine degree is 360 credits. One Finnish credit equals to one ECTS credit. The average input of 1600 working hours needed for studies of one academic year is equivalent to 60 credits. Medical studies are pre-scheduled and the training is organized in such a manner that with full-time attendance the degree can be taken in six years.

The degree programme consists of basic, intermediate and advanced studies, optional studies, language studies and compulsory practical training.

The preclinical stage lasts for two years (Semesters 1-4) and mostly consists of general studies. The completion of clinical studies takes four years (Semesters 5-12). During this phase students focus on the occurrence, onset, diagnostics, treatment and prevention of various diseases. Bed-side teaching is part of students' daily routine.

Most of the courses are compulsory for all students. Some study modules, especially thesis in advanced studies, can be chosen according to the student's own interests. It is also possible to begin scientific research work before graduation.

The total amount of practical training is 30 credits. Obligatory clerkship means two weeks' practical training in Internal Medicine and two weeks in Surgery (total 6 credits). Elective clerkship can be chosen according to the interests of the student (total 24 credits). Four weeks of the practical training is done in the health centres and is included in the curriculum.

Examination and Assessment Regulations

Assessment is based on examinations, exercises, essays, field work, clinical work, reports or any other method determined pedagogically appropriate for the particular course. All the exams can be retaken. Additional information is given from the organizing subject.

Grades used for assessment of the courses are: 5 (excellent, ECTS A), 4 (very good, ECTS B), 3 (good, ECTS C), 2 (satisfactory, ECTS D), 1 (sufficient, ECTS E), 0 (fail); pass or fail.

ECTS departmental Coordinator

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Tutkintorakenteisiin kuulumattomat opintokokonaisuudet ja -jaksot

040425S: , 3 op
 080600A: Acute and chronic pain, 2,5 op
 040418S: Advanced course on fluid management, 0,5 op
 040429S: Advanced studies of endocrinology, cardiology and pulmonary diseases, 1,5 op
 080601A: Anaesthesiology I, 3 - 4 op
 040101A: Anatomy, 15 op
 040601S: Anesthesia in operation room, 1 op
 040105Y: Basic Epidemiology, 1,5 op
 040445S: Basic skills of ocular examination for an ophthalmology resident, 0,5 op
 040005Y: Biostatistics, 3 op
 040004Y: Chemistry, 6 op
 040004Y-03: Chemistry Laboratory works, 0 op
 040004Y-04: Chemistry Math practice, 0 op
 040004Y-01: Chemistry, general and inorganic chemistry, 0 op
 040004Y-02: Chemistry, organic chemistry, 0 op
 080503A: Child psychiatry, 3 op
 080603A-04: Clinical chemistry, 2,5 op
 080603A-05: Clinical chemistry, endocrinology, 1,5 op
 080505A: Clinical genetics, 2 op
 040126A: Clinical pharmacology, 2,5 op
 040423S: Clinical pharmacology, 1 op
 903008Y: Conversational Skills in German, 1,5 op
 080699A: Course for Clinical Examination of Patients, 3 op
 080203A: Dermatology and venereology, 5 op
 040422S: Dermatology; from basics to clinic, 1 op
 040401A: Dissection, 3 op
 040301S: Dissection of head and neck, 0,5 op
 080722A: Elective Course of Surgery, 1 op
 040119Y: Environmental health care, 1 op
 040408S: Exercise and Work Physiology, 1 op
 040405S: Experimental pharmacology, 1,5 op
 040416S: Extension course of musculoskeletal medicine, 2 op
 040006Y: First aid, 1 op
 080202A: Forensic medicine, 4 op
 040108A: General Pathology, 3,5 - 5 op
 080417A: General Practitioner and Public Health, 9,5 op
 040015Y: Health Care Ethics, 1 - 3,5 op
 080415A: Health centre practice, 4,5 op
 080700A: Infectious diseases, 5 op
 080711A-13: Internal Medicine, final examination, 0 op
 080711A: Internal medicine I, 4,5 - 21 op
 040117Y: Interviewing and examining patients, 4 op
 040013Y: Introduction to Medical Studies, 2 op
 040007Y: Introduction to scientific research, 1,5 op
 040419S: Management of acute pain - simulation training, 0,5 op
 040300A: Maturity exam (native language), 0 op
 040103A: Medical Biochemistry and Molecular Biology, 14 - 15 op
 903007Y: Medical German Text Workshop, 1,5 op
 040414S: Medical autopsy pathology, 4 op
 040112Y: Medical biophysics, 2,5 op
 040002Y: Medical cell and developmental biology, 7 op
 040011Y-01: Medical informatics, module 1, information and Communication Technology, 0,5 op
 040011Y-02: Medical informatics, module 2, literature retrieval, 1 op
 040011Y-03: Medical informatics, module 3, clinical information systems, 0,5 op
 080005Y: Medical latin, 1,5 op

080001Y: Medical rescue work, 4 - 5 op
 040117A: Microbiology: Medical microbiology and immunology, 9,5 op
 040434S: Molecular developmental biology, 2 op
 040406A: Most recent topics in child psychiatry, 2,5 op
 080301A: Neurology, 6 - 6,5 op
 080304A: Neurosurgery, 3 op
 080510A: OSCE, 0 op
 080401A: Obstetrics and gynecology, 10 op
 080410A: Occupational health, 2 op
 080204A: Oncology, 4 op
 080303A: Ophthalmology, 4 op
 040417S: Oral and dental diseases, 0,5 op
 080211A-02: Organ pathology, 2,5 op
 080211A-01: Organ pathology I, 9,5 op
 080302A: Oto-rhino-laryngology, 6 op
 040438S: Otorhinolaryngology: Audiology, 1 op
 080502A: Pediatrics, 14 op
 040106A: Pharmacology and toxicology, 10 op
 080703A: Physiatry, 3 op
 040112A: Physiology, 15 op
 080206A: Prescriptions, 0,5 op
 080103A: Psychiatry, 12 - 14 op
 080511A-01: Psychiatry I, 7,5 op
 080511A-02: Psychiatry II, 6,5 op
 040104A: Psychology, 4 - 4,5 op
 040116Y: Public health and interprofessional collaboration, 5 op
 080205A: Pulmonary diseases, 3 op
 080623A: Radiation physics, biology and safety, 1 op
 080622A-01: Radiology I, 3 op
 080622A-02: Radiology II, 3 op
 902006Y: Reading for Academic Purposes, 1,5 op
 040415S: Refresh course of resuscitation, 1,5 op
 902007Y: Scientific Communication, 1,5 op
 901006Y: Second Official Language (Swedish), 3 op
 080712A: Surgery I, 16 - 24 op
 080712A-04: Surgery II, 6 op
 080723A: Surgical operations-optional course, 1 op
 080705S: Thesis, 20 op

Opintojaksojen kuvaukset

Tutkintorakenteisiin kuulumattomien opintokokonaisuuksien ja -jaksojen kuvaukset

040425S: , 3 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Uhari, Matti Kalervo

Opinto-kohteen kielet: Finnish

ECTS Credits:

3 credits/ 2 credit units

Language of instruction:

Finnish

Timing:

C 9-12, spring, once a year

Learning outcomes:

Teach diagnostic thinking and skills at the student in clinical work.

Contents:

Diagnostic terms and figures of diagnostic tests are explained, evaluation of articles at diagnostic tests.

Learning activities and teaching methods:

Lectures

Seminars: one diagnostic article is analyzed and presented per student in the seminar.

Using diagnostic skills in real patient problems.

Learning diary.

Recommended or required reading:

Lectures, articles, literature of evidence based medicine

Assessment methods and criteria:

Writing a review and participation in teaching.

Grading:

The evaluation scale is pass/fail

Person responsible:

Professor Matti Uhari

Other information:

At least 12 students should be entered before the course is organized.

080600A: Acute and chronic pain, 2,5 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

2.5 study points.

Language of instruction:

Finnish.

Timing:

C 7&8 (Fourth year)

Learning outcomes:

The students have theoretical knowledge of pain treatment both in acute and chronic pain. Can start treatment to acute and chronic pain. Can treat cancer pain.

Contents:

Basics of pain mechanisms and types of pain. Diagnostics of chronic pain. Principles of pain treatment in acute and chronic pain. Treatment of cancer pain. Special pain treatment methods with medicines, central blocs and combination therapy.

Learning activities and teaching methods:

Lectures, theme days, practicing in small groups.

Recommended or required reading:

Given during the course

Assessment methods and criteria:

Taking part into lectures, theme days and group teaching events.

Grading:

The evaluation scale is pass/fail.

Person responsible:

Professor Seppo Alahuhta

040418S: Advanced course on fluid management, 0,5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

0,5 op

Timing:

C8

Learning outcomes:

To deepen the knowledge and skills in fluid therapy .

Contents:

Fluid physiology, water and electrolyte deficit, disturbances in glucose balance, acid-base disturbances.

Learning activities and teaching methods:

Problem-based learning, case reports

Recommended or required reading:

Handout

Assessment methods and criteria:

Small-group teaching.

Grading:

Accepted/failed

Person responsible:

Professor Seppo Alahuhta

040429S: Advanced studies of endocrinology, cardiology and pulmonary diseases, 1,5 op

Voimassaolo: - 31.07.2007

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Kesäniemi Antero

Opintokohteen kielet: Finnish

080601A: Anaesthesiology I, 3 - 4 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

3.0 study points.

Language of instruction:

Finnish.

Timing:

C 5&6 (Third year)

Learning outcomes:

The students recognize cardiac arrest and can resuscitate. Know what belongs to advanced life support both in adults and children. Recognize life threatening cardiac arrhythmias. Can pre-operative examination. Have basic of fluid and nutritional therapy. Have basics of pain treatment. Can normal infusion and airway managements.

Contents:

Resuscitation and first aid. Pre-operative examination and treatment. Anesthetics and methods. Treatment of pain Nutrition and fluid therapy. Intubation. Infusion technique.

Learning activities and teaching methods:

Lectures, theme days, practicing in small groups, practicing in operation theatres.

Recommended or required reading:

Textbook: Miller's Anesthesia, vol. 1-2 Ed. Miller. 6th Edition 2005

Assessment methods and criteria:

Taking part into the group teaching events and practice. Web exam of resuscitation. Written end examination.

Grading:

The end examination gives the end marking (0-5)

Person responsible:

Professor Seppo Alahuhta

040101A: Anatomy, 15 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuukkanen, Kaarlo Juha Kullervo

Opintokohteen kielet: Finnish

ECTS Credits:

15 credits

Timing:

C1

Learning outcomes:

The learning outcomes are to understand the structure, development and function of the human body in order to manage the rest of the preclinical and clinical studies. The overall aim is to learn the structures essential for all medical doctors in diagnostics and treatment, especially for first aid. In addition the student will learn some common anatomical knowledge for understanding medical theory and research and for dealing with evidence based medicine.

Contents:

Systemic anatomy: blood, cardiovascular system and lymphatic system, thorax and respiratory system, abdomen and alimentary system, urinary system and integument, pelvis and genital systems, endocrine system, musculoskeletal system and nervous system and sensory organs. Regional anatomy and topographical anatomy, organ development and histology integrated with the previous titles. Examples of the applications of the anatomical knowledge in clinical cases.

Learning activities and teaching methods:

Lectures 82 h and 58 h small group exercise. Small group teaching will be provided in 2-4 h exercises. Each student will have 1-2 exercise sessions per week. In addition the dental students have at the 2nd term tooth development, histology and morphology given by the department of Dentistry. Anatomy study module includes an optional course of the anatomical dissection and another dissection course of a large mammal (pig).

Recommended or required reading:

K.L. Moore: Clinically oriented Anatomy, Williams & Wilkins co (latest edition) or alternatively R.L. Drake, W. Vogl, A.W.M. Mitchell: Grays Anatomy for students. Elsevier Churchill Livingstone (latest edition) Atlas: R. Putz, R. Pabst: Sobotta, Atlas of human anatomy, Vols I-II. Elsevier Urban&Fischer (latest edition) F.H. Netter: Atlas of human anatomy. Ciba-Geigy Pocket atlas: H. Feneis: Pocket Atlas of Human Anatomy. G. Thieme Publ., Stuttgart 4. edition preferred (5. edition possible) W.Kahle, H. Leonhardt, W. Platzer: Color atlas and textbook of human anatomy, Vols I-III, G. Thieme Publ., Stuttgart (latest edition).

Web material:

<http://www.bartleby.com/107/> H. Gray: Anatomy of the human body (1918)

<http://www.thieme.com/dyn/ebooklibrary/index.php> many books, free access from the computers in the internet domain of Oulu University. Handouts of the lectures and practicals.

Assessment methods and criteria:

Participation in the small group teaching of macroscopic anatomy and histology. The anatomy study module includes examinations in neuroanatomy and the final anatomy examination. Anatomy study module together with the study module of cell and developmental biology defines the grade of Anatomy.

Grading:

Anatomy together with cell and developmental biology make the Anatomy course, which is composed of the following grades: examination of cell and developmental biology 30 credit points, histology 10 credit points, neuroanatomy 10 credit points, examinations in small group sessions 30 credit points and final examination in anatomy 40 credit points, in sum 120 credit points graded to 0-5.

Person responsible:

Professor Petri Lehenkari (Professor Juha Tuukkanen, leave of absence)

Other information:

The course is the same for medical and dental students.

040601S: Anesthesia in operation room, 1 op

Voimassaolo: 01.08.2007 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

1 op

Language of instruction:

Finnish

Timing:

C6

Learning outcomes:

To give deeper knowledge and skills to students going to work in anaesthesiology unit.

Contents:

Perioperative fluid therapy. Pharmacodynamics and -kinetics of anesthesia drugs. The use of anesthesia ventilators. Postoperative pain management

Learning activities and teaching methods:

Lectures. Practicing and simulation in small groups.

Recommended or required reading:

Given during the course

Assessment methods and criteria:

Taking part into lectures, practicing and simulations.

Grading:

The evaluation scale is pass/fail.

Person responsible:
Professor Seppo Alahuhta

040105Y: Basic Epidemiology, 1,5 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Jouni Jaakkola

Opintokohteen kielet: Finnish

ECTS Credits:

1,5 op

Language of instruction:

Finnish. Can be offered in English if several English speaking student registered.

Timing:

Lectures on 2. Year spring term.

Learning outcomes:

Students are expected to learn the basic concepts of epidemiology and basics of epidemiologic methods used in medicine and in general in health sciences.

Contents:

The course includes a lecture on the following topics: 1) introduction to basic concepts and causality, 2) principles of study design, 3) precision and validity, 4) exposure assessment, 5) assessment of health effects and measures of disease occurrence, association and effect, 6) principles of cohort studies, 7) data analysis in cohort studies, 8) principles of case-control studies, 9) data analysis in case-controls studies and 10) cross-sectional studies. In addition, the course includes two exercise sessions conducted in small groups on: 1) epidemiologic methods based on critical reviews of articles and 2) calculation. Students will also review individually and critically an scientific article.

Learning activities and teaching methods:

10 one-hour lectures, two 3-hour exercise sessions and critical review of an articles.

Target group:

Basic course for medical students, but suitable for students planning research in health sciences.

Recommended optional programme components:

Closely linked to the course in biostatistics taught in the same term.

Recommended or required reading:

Lecture notes. Recommended books: Hernberg S. Introduction to occupational epidemiology (1992) ja Rothman K. Epidemiology. An Introduction (2002).

Assessment methods and criteria:

Lectures highly recommended and exercise sessions compulsory. Written exam.

Grading:

5 - 1 / fail.

Person responsible:

Jouni J.K. Jaakkola, professor of public health.

040445S: Basic skills of ocular examination for an ophthalmology resident, 0,5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuulonen, Anja Elisa

Opintokohteen kielet: Finnish

ECTS Credits:

0.5 op

Timing:

C9

Learning outcomes:

This course gives practical skills needed in a doctor's work at an ophthalmology unit.

Contents:

Small group teachings in which practical skills needed at the work of an ophthalmologist are introduced.

Learning activities and teaching methods:

Small group teachings 12 h

Recommended or required reading:

Study materials are provided by the teachers.

Assessment methods and criteria:

The completion of the course includes participation in all group teachings.

Grading:

pass/fail

Person responsible:

Professor of Ophthalmology

Other information:

Teaching in English is possible. The students are selected based on applications, possible interview and the grades of the Ophthalmology course.

040005Y: Biostatistics, 3 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Pentti Nieminen

Opintokohteen kielet: Finnish

ECTS Credits:

3 credits

Timing:

C4

Learning outcomes:

By the end of the course the student should be able to:

- plan study designs and statistical computing in medical and dental research,
- obtain and analyze data with basic statistical methods,
- use basic statistical significance tests and inference methods,
- evaluate critically medical research reports

Contents:

Aims and phases of statistical research, planning statistical research, obtaining data, variable distributions (frequencies, graphs and statistics), basics in statistical inference and methods (estimates, significance tests and confidence limits), basic methods in comparing groups and estimating associations between variables, specific methods applied in medical research.

Learning activities and teaching methods:

Lessons 18 h, study-group sessions 12 h, practical projects and home-works 30 h.

Recommended or required reading:

Uhari M ja Nieminen P: Epidemiologia ja biostatistiikka. Duodecim, 2001.

Assessment methods and criteria:

Regular and active participation in the small group lessons and completion of a practical project. Written examination.

Grading:

0-5

Person responsible:

Docent Pentti Nieminen

Other information:

This course is a part of the studies in research skills.

040004Y: Chemistry, 6 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

6op

Timing:

C2

Learning outcomes:

After finishing the module student should have a basic knowledge concerning chemistry and laboratory work

Contents:

General and inorganic chemistry: Basic concepts of chemistry; structure of atom; chemical bond; chemical formula, reaction and equations, stoichiometry; thermodynamics; phase equilibrium; reaction kinetics; chemical equilibrium; acid/base equilibrium; electrochemistry. Organic chemistry: nomenclature of organic compounds; carbon bonds; stereochemistry; properties and reactions of organic compounds; carbohydrates. Laboratory work: Gravimetry; titration; photometry; chromatography; reaction rate; methodology of organic chemistry; chemical buffers.

Learning activities and teaching methods:

Lectures 56 h, practice of calculations 4 h, laboratory work 15 h. Optional tutoring.

Recommended or required reading:

R. Laitinen ja J. Toivonen: Yleinen ja epäorgaaninen kemia, soveltuvien osin. Otakustantamo. Harold Hart: Organic Chemistry. A short Course, Houghton Mifflin Company, 6. (1983) or updated edition. Lectures and laboratory work. Kemian opintojakson työt -moniste (LTK/lääketieteellisen biokemian ja molekyylibiologian laitos).

Assessment methods and criteria:

Separate exams for common and inorganic chemistry, and organic chemistry. Optional possibility to practice calculations.

Grading:

Common and inorganic chemistry will be graded in scale 0-28 where the lowest qualified limit is 14/28. Organic chemistry will be graded in scale 0-20 where the lowest qualified limit is 10/20. Total maximum score is 48 p from the chemistry module where 24-27.75 (1), 28-31.75 (2), 32-35.75 (3), 36-39.75 (4) and 40-48 (5).

Person responsible:

Professor Taina Pihlajaniemi

Other information:

It is possibly to take final exam before chemistry module that will (if passed) liberate student from the actual final exams, but not from the laboratory works.

040004Y-03: Chemistry Laboratory works, 0 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: General Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 0,0 - 99,9

Opintokohteen kielet: Finnish

ECTS Credits:

6op

Timing:

C2

Learning outcomes:

After finishing the module student should have a basic knowledge concerning chemistry and laboratory work

Contents:

General and inorganic chemistry: Basic concepts of chemistry; structure of atom; chemical bond; chemical formula, reaction and equations, stoichiometry; thermodynamics; phase equilibrium; reaction kinetics; chemical equilibrium; acid/base equilibrium; electrochemistry. Organic chemistry: nomenclature of organic compounds; carbon bonds; stereochemistry; properties and reactions of organic compounds; carbohydrates.

Laboratory work: Gravimetry; titration; photometry; chromatography; reaction rate; methodology of organic chemistry; chemical buffers.

Learning activities and teaching methods:

Lectures 56 h, practice of calculations 4 h, laboratory work 15 h. Optional tutoring.

Recommended or required reading:

R. Laitinen ja J. Toivonen: Yleinen ja epäorgaaninen kemia, soveltuvien osien. Otakustantamo. Harold Hart: Organic Chemistry. A short Course, Houghton Mifflin Company, 6. (1983) or updated edition. Lectures and laboratory work. Kemian opintojakson työt -moniste (LTK/lääketieteellisen biokemian ja molekyylibiologian laitos).

Assessment methods and criteria:

Separate exams for common and inorganic chemistry, and organic chemistry. Optional possibility to practice calculations.

Grading:

Common and inorganic chemistry will be graded in scale 0-28 where the lowest qualified limit is 14/28. Organic chemistry will be graded in scale 0-20 where the lowest qualified limit is 10/20. Total maximum score is 48 p from the chemistry module where 24-27.75 (1), 28-31.75 (2), 32-35.75 (3), 36-39.75 (4) and 40-48 (5).

Person responsible:

Professor Taina Pihlajaniemi

Other information:

It is possibly to take final exam before chemistry module that will (if passed) liberate student from the actual final exams, but not from the laboratory works.

040004Y-04: Chemistry Math practice, 0 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: General Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 0,0 - 99,9

Opintokohteen kielet: Finnish

ECTS Credits:

6op

Timing:

C2

Learning outcomes:

After finishing the module student should have a basic knowledge concerning chemistry and laboratory work

Contents:

General and inorganic chemistry: Basic concepts of chemistry; structure of atom; chemical bond; chemical formula, reaction and equations, stoichiometry; thermodynamics; phase equilibrium; reaction kinetics; chemical equilibrium; acid/base equilibrium; electrochemistry. Organic chemistry: nomenclature of organic compounds; carbon bonds; stereochemistry; properties and reactions of organic compounds; carbohydrates.

Laboratory work: Gravimetry; titration; photometry; chromatography; reaction rate; methodology of organic chemistry; chemical buffers.

Learning activities and teaching methods:

Lectures 56 h, practice of calculations 4 h, laboratory work 15 h. Optional tutoring.

Recommended or required reading:

R. Laitinen ja J. Toivonen: Yleinen ja epäorgaaninen kemia, soveltuvien osien. Otakustantamo. Harold Hart: Organic Chemistry. A short Course, Houghton Mifflin Company, 6. (1983) or updated edition. Lectures and laboratory work. Kemian opintojakson työt -moniste (LTK/lääketieteellisen biokemian ja molekyylibiologian laitos).

Assessment methods and criteria:

Separate exams for common and inorganic chemistry, and organic chemistry. Optional possibility to practice calculations.

Grading:

Common and inorganic chemistry will be graded in scale 0-28 where the lowest qualified limit is 14/28. Organic chemistry will be graded in scale 0-20 where the lowest qualified limit is 10/20. Total maximum score is 48 p from the chemistry module where 24-27.75 (1), 28-31.75 (2), 32-35.75 (3), 36-39.75 (4) and 40-48 (5).

Person responsible:

Professor Taina Pihlajaniemi

Other information:

It is possibly to take final exam before chemistry module that will (if passed) liberate student from the actual final exams, but not from the laboratory works.

040004Y-01: Chemistry, general and inorganic chemistry, 0 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: General Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 0,0 - 99,9

Opintokohteen kielet: Finnish

ECTS Credits:

6op

Timing:

C2

Learning outcomes:

After finishing the module student should have a basic knowledge concerning chemistry and laboratory work

Contents:

General and inorganic chemistry: Basic concepts of chemistry; structure of atom; chemical bond; chemical formula, reaction and equations, stoichiometry; thermodynamics; phase equilibrium; reaction kinetics; chemical equilibrium; acid/base equilibrium; electrochemistry. Organic chemistry: nomenclature of organic compounds; carbon bonds; stereochemistry; properties and reactions of organic compounds; carbohydrates. Laboratory work: Gravimetry; titration; photometry; chromatography; reaction rate; methodology of organic chemistry; chemical buffers.

Learning activities and teaching methods:

Lectures 56 h, practice of calculations 4 h, laboratory work 15 h. Optional tutoring.

Recommended or required reading:

R. Laitinen ja J. Toivonen: Yleinen ja epäorgaaninen kemia, soveltuvien osin. Otakustantamo. Harold Hart: Organic Chemistry. A short Course, Houghton Mifflin Company, 6. (1983) or updated edition. Lectures and laboratory work. Kemian opintojakson työt -moniste (LTK/lääketieteellisen biokemian ja molekyylibiologian laitos).

Assessment methods and criteria:

Separate exams for common and inorganic chemistry, and organic chemistry. Optional possibility to practice calculations.

Grading:

Common and inorganic chemistry will be graded in scale 0-28 where the lowest qualified limit is 14/28. Organic chemistry will be graded in scale 0-20 where the lowest qualified limit is 10/20. Total maximum score is 48 p from the chemistry module where 24-27.75 (1), 28-31.75 (2), 32-35.75 (3), 36-39.75 (4) and 40-48 (5).

Person responsible:

Professor Taina Pihlajaniemi

Other information:

It is possibly to take final exam before chemistry module that will (if passed) liberate student from the actual final exams, but not from the laboratory works.

040004Y-02: Chemistry, organic chemistry, 0 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: General Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 0,0 - 99,9

Opintokohteen kielet: Finnish**ECTS Credits:**

6op

Timing:

C2

Learning outcomes:

After finishing the module student should have a basic knowledge concerning chemistry and laboratory work

Contents:

General and inorganic chemistry: Basic concepts of chemistry; structure of atom; chemical bond; chemical formula, reaction and equations, stoichiometry; thermodynamics; phase equilibrium; reaction kinetics; chemical equilibrium; acid/base equilibrium; electrochemistry. Organic chemistry: nomenclature of organic compounds; carbon bonds; stereochemistry; properties and reactions of organic compounds; carbohydrates. Laboratory work: Gravimetry; titration; photometry; chromatography; reaction rate; methodology of organic chemistry; chemical buffers.

Learning activities and teaching methods:

Lectures 56 h, practice of calculations 4 h, laboratory work 15 h. Optional tutoring.

Recommended or required reading:

R. Laitinen ja J. Toivonen: Yleinen ja epäorgaaninen kemia, soveltuvien osin. Otakustantamo. Harold Hart: Organic Chemistry. A short Course, Houghton Mifflin Company, 6. (1983) or updated edition. Lectures and laboratory work. Kemian opintojakson työt -moniste (LTK/lääketieteellisen biokemian ja molekyylibiologian laitos).

Assessment methods and criteria:

Separate exams for common and inorganic chemistry, and organic chemistry. Optional possibility to practice calculations.

Grading:

Common and inorganic chemistry will be graded in scale 0-28 where the lowest qualified limit is 14/28. Organic chemistry will be graded in scale 0-20 where the lowest qualified limit is 10/20. Total maximum score is 48 p from the chemistry module where 24-27.75 (1), 28-31.75 (2), 32-35.75 (3), 36-39.75 (4) and 40-48 (5).

Person responsible:

Professor Taina Pihlajaniemi

Other information:

It is possibly to take final exam before chemistry module that will (if passed) liberate student from the actual final exams, but not from the laboratory works.

080503A: Child psychiatry, 3 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

3.0 op

Timing:

C 9-10

Learning outcomes:

The student who has passed the course of Child Psychiatry has got acquainted with the psychological development and mental health of children, with the child psychiatric health care organisation, with the legislation and with the diagnostics and treatment of the most usual child psychiatric disorders and has got readiness to work as a physician in the health center and as a junior trainee in the hospital.

Learning activities and teaching methods:

1) Lectures:

- the lectures consist of the main legislation, the diagnostics and treatment of the most usual child psychiatric disorders and the child psychiatric health care organisation

2) Special themes:

- sexual abuse and child molestation
- intoxications: drugs and alcohol

3) In-patient teaching:

- getting acquainted with the child psychiatric in-patient treatment by participating to the representation of the in-

patient department and to the representation of the patient cases

- getting acquainted with the own patient case and present the case in the study group
- participating to the presentation of the patient cases of the other students in the study group

4) Out-patient teaching:

- following of the two out-patient sessions

5) Problem based learning:

- solving and representing the example patient cases in the study group
- getting acquainted with the evidence based practices

Recommended or required reading:

Moilanen I, Räsänen E, Tamminen T, Almqvist F, Piha J, Kumpulainen K. Lasten- ja nuorisopsykiatria. Kustannus Oy Duodecim, 2004, 3. p.

or

Barker P: Basic child psychiatry. Oxford, Blackwell Science, last edition

Assessment methods and criteria:

- Admission exam: textbook
- Final exam: textbook, lectures and study group teachings
- Objective structured clinical examination at the end of the spring term including all courses of the fifth academic year

Grading:

- The admission exam is evaluated from 0 to 25 points (the approval limit is 15 points)
- The final exam is evaluated from 0 to 10 points (the approval limit is 5 points)
- The course is approved when all exams are approved and the student has attended to all compulsory teaching,

Person responsible:

Professor Hanna Ebeling (hanna.ebeling@ppshp.fi)

080603A-04: Clinical chemistry, 2,5 op

Voimassaolo: 01.08.2001 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Risteli, Juha

Opintokohteen kielet: Finnish

ECTS Credits:

2,5 op

Timing:

C5-6

Learning outcomes:

By the end of the course the student will understand the most frequently used tests in clinical chemistry and haematology and their indications and critical interpretation. The student knows the facts that affect the deviation of the laboratory tests, biological variation, pre-analytical and analytical factors, and understand their importance in interpreting the test results. The student knows how sample taking is standardized so that the above facts that increase the deviation in test results can be eliminated. The student knows the basics of the quality control of the laboratory tests.

Contents:

Lectures contain following subjects: Clinical Chemistry as a medical speciality, diagnostics of heart and vascular disorders, examination of kidneys and urinary tracts, clinical enzymology, examination of liver and gastrointestinal tract, laboratory tests in haematology, tests to analyze water, sodium and potassium balance, therapeutic drug monitoring and chemical toxicology, most frequently used laboratory test and their indications and use of radioactive isotopes in medical diagnostics. Contents of small group practical courses: taking blood samples and preparation of samples for different tests, results of laboratory test in healthy individuals, reference ranges, sources of errors and their origin and quality controls of laboratory tests, basic blood cell count and microscopic examination of blood cells and commonly used isotope methods in patients. Content of the theme day: the students are acquainted to point of care tests.

Learning activities and teaching methods:

Lectures 20 h, small group practical courses 8 h and one theme day. In addition the student has independent preparation for small group practical courses and for the theme day.

Recommended or required reading:

Textbook: Clinical Chemistry, 5th edition, Mosby, W.J. Marshall, S.K. Bangert 2004. Other textbooks: Veritaudit, Kustannus Oy Duodecim, T. Ruutu, A. Rajamäki, R. Lassila, K. Porkka 2007; Kliininen fysiologia ja isotooppilääketiede, Kustannus Oy Duodecim, A. Sovijärvi, A. Ahonen, J. Hartiala, E. Länsimies, S. Savolainen, V. Turjanmaa, E. Vanninen, 2003.

Assessment methods and criteria:

Assessment is based on materials given in lectures, small group practical courses, in textbooks and other materials given to the students.

Grading:

The evaluation is based on examination which gives 2/3 of total score of clinical chemistry. Total evaluation scale is 0 - 5.

Person responsible:

Professor Juha Risteli

080603A-05: Clinical chemistry, endocrinology, 1,5 op

Voimassaolo: 01.08.2001 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Risteli, Juha

Opintokohteen kielet: Finnish

ECTS Credits:

1,5 op

Timing:

C9-10

Learning outcomes:

By the end of the course the student understands the feedback control systems in endocrinology and can diagnose the common endocrine disorders and their reasons. The student knows the hormone determinations and indications to use them. They know the common weaknesses and disturbing factors of hormone determinations.

Contents:

Theoretical background of clinical endocrinology, hormone determinations, adrenal function and its disorders, hirsutism and virilism, galactorrhea and amenorrhea, ectopic hormone production, the follow up of pregnancy by clinical chemical methods, hormonal contraception, endocrinology of aging, thyroid function and its disorders and calcium metabolism and its disorders.

Learning activities and teaching methods:

Lectures 16 h, small group practical course 2 h and independent preparation for small group practical course.

Recommended or required reading:

Textbook: Endokrinologia, Kustannus Oy Duodecim, M. Välimäki, T. Sane, L. Dunkel, 2000. Lectures and other materials given to the students.

Assessment methods and criteria:

Assessment is based on materials given in lectures, small group practical course and textbook.

Grading:

The evaluation is based on examination which given 1/3 of total score of clinical chemistry. Total evaluation scale is 0-5.

Person responsible:

Professor Aimo Ruukonen

080505A: Clinical genetics, 2 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

.5 ECTS credits

Language of instruction:

Finnish.

Timing:

C9-C10 (5th year spring term)

Learning outcomes:

Upon completion the student should be able to:

- identify/suspect a genetic disease in the patient/family
- identify those patients in need of genetic counselling and refer them further to a clinical genetics unit
- know the structure of chromosomes and genes, their examination and to be able to interpret the chromosome and DNA examination results
- to be able to explain the recurrence risks in different modes of inheritance, to discuss their significance for family members and to know the possibilities of prenatal diagnostics
- to know the unique genetic disease spectrum in Finland
- to understand the special nature of genetic disease and especially recognize the ethical problems related to genetic testing, and recognize the need of special care for families with a child suffering from congenital malformations/genetic disease and adult patients with serious genetic conditions.

Contents:

Clinical genetics as a medical speciality. Examination of the patient and family, drawing the pedigree. Chromosomal disorders, principles and indications of chromosome studies. Principles and clinical applications of DNA studies. Population genetics and "Finnish Disease Heritage". Hereditary cancer, diagnosis, examination and counselling. Congenital malformations, basics of dysmorphology and syndrome identification. Prenatal diagnostics, genetic screening and counselling. Genetics of complex diseases. Genetic ethics. Principles and practice of genetic counselling, genetic services.

Learning activities and teaching methods:

Lectures (16h), Seminar (4h), Small group teaching (2h)

Recommended or required reading:

Textbook: Aula P, Kääriäinen H, Palotie A: Perinnöllisyyslääketiede. Duodecim 2006.

Recommended additional reading: Read A, Donnai D: New Clinical Genetics. Scion 2006.

Assessment methods and criteria:

Lectures, seminar, small group teaching (obligatory). Written examination based on lectures and textbook.

Grading:

The evaluation scale is pass/fail.

Person responsible:

Jaakko Ignatius, Acting professor in Clinical Genetics

040126A: Clinical pharmacology, 2,5 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

2,5 credits

Language of instruction:

Finnish

Timing:

C8-9

Learning outcomes:

After passing the course the student should have ability to safe, efficient and cost effective drug therapy. The student should understand the basis for drug therapy from the point of view of general practitioner and the treatment of most common intoxications.

Contents:

Factors affecting drug selection, dosage and therapy will be discussed applying knowledge of basic pharmacology. Furthermore, the common problem cases of drug therapy will be discussed.

Individualized therapy, use of major classes of drugs, special treatment situations and most common intoxications will also be discussed.

Learning activities and teaching methods:

Introductory lecture 2 hours. Clinical pharmacology patient case report and discussion with tutor. Thematic seminars (11 x 2 h) will cover major areas of drug therapy and special situations of drug treatment. Final exam.

Recommended or required reading:

Book: Neuvonen, Himberg, Huupponen, Kivistö and Ylitalo(eds.)

Kliininen farmakologia ja lääkehoito, Kandidaatikustannus Oy (latest edition). Materials of the thematic seminars.

Assessment methods and criteria:

Preparation of acceptable clinical pharmacology patient case, discussion with the tutor and passing of the final exam.

Grading:

Pass/fail

Person responsible:

Miia Turpeinen (miia.turpeinen@oulu.fi)

040423S: Clinical pharmacology, 1 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Hakkola, Jukka Antti Tapio

Opintokohteen kielet: Finnish

ECTS Credits:

1.0 credits

Language of instruction:

Finnish

Timing:

C9 or later

Learning outcomes:

The student will gain more advanced knowledge on factors affecting drug therapy including genetics, other medication and adverse affects. After the course the student should have a clear view on needs and ways of therapeutic drug monitoring and individualized therapy.

Contents:

Pharmacogenetics: basics, examples of important pharmacogenetic conditions, clinical significance, pharmacogenomics. Drug toxicity: safety-risk assessment, expected and idiosyncratic adverse effects. Pharmacovigilance, drug development, clinical drug trials.

Learning activities and teaching methods:

10 h seminars, pharmacogenetic practical work

Target group:

Students passed Clinical pharmacology course

Recommended optional programme components:

Passed Clinical pharmacology course

Recommended or required reading:

Book: Neuvonen, Himberg, Huupponen, Kivistö and Ylitalo (eds.)

Kliininen farmakologia ja lääkehoito, Kandidaatikustannus Oy (latest edition). Materials of the thematic seminars

Assessment methods and criteria:

Attendance to classes and learning diary

Grading:

pass/fail

Person responsible:

Miia Turpeinen (miia.turpeinen@oulu.fi), Päivi Myllynen(paivi.myllynen@oulu.fi)

Other information:

Maximum number of students is 20. The course is voluntary and is aimed at medical students.

903008Y: Conversational Skills in German, 1,5 op

Voimassaolo: 01.08.1995 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Language Centre

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: German

Proficiency level:

Eurooppalaisen viitekehysten taitotaso A2-B1. Jos opiskelija suorittaa tämän kurssin pakollisena kurssina, täytyy hänen osoittaa saavuttaneensa taitotaso B1.

Status:

Kurssi hyväksytään osasuorituksena opintojaksoon vieras kieli. Sen voi suorittaa myös vapaaehtoisena.

Required proficiency level:

Vähintään 3 vuotta saksaa koulussa tai vastaavat tiedot. Jos valitset saksan kieleksi, josta suoritat pakolliset vieraan kielen opinnot, vaaditaan saksa koulussa joko B2, A2 tai A1 - kielenä tai vastaavat tiedot.

ECTS Credits:

1,5 op

Language of instruction:

saksa

Timing:

Kurssi järjestetään syyslukukaudella.

Learning outcomes:

Kurssin jälkeen opiskelija selviytyy sekä yleisissä että lääketieteellisen alan työtehtävien tyypillisissä viestintätilanteissa vuorovaikutteisesti. Hän pystyy aktiivisesti osallistumaan lääketieteellisiä aiheita koskeviin keskusteluihin. Hän osaa perustella näkökantansa eri teemoihin ja esittää eri vaihtoehtojen edut ja haitat.

Contents:

Kurssin sisältö koostuu pääasiallisesti suullisista harjoituksista, joiden muotoja voivat olla parikeskustelut, ryhmäkeskustelut, roolisuoritukset, simulaatiot jne. Kurssilla harjoitellaan mm. erilaisia tilanteita sairaalassa ja lääkärin vastaanotolla, keskustellaan ajankohtaisista lääketiedettä koskevista aiheista sekä aiheista, jotka on sovittu osanottajien kanssa kurssin alussa.

Learning activities and teaching methods:

Opetusta on noin 2 tuntia viikossa ja itsenäistä työskentelyä.

Target group:

Lääketieteellisen tiedekunnan opiskelijat.

Recommended or required reading:

Opettajan valmistama materiaali. Jaetaan tunnilla.

Assessment methods and criteria:

Kurssin suorittaminen edellyttää aktiivista osallistumista harjoituksiin ja sovittujen tehtävien tekemistä.

Grading:

Numeroarviointi arvoasteikolla 1-5, opiskelija voi saada myös hyväksyty/hylätty (jos kurssi ei ole pakollinen).

Person responsible:

Sabine Grasz

Other information:

Kurssi järjestetään Aapistiellä. Ilmoittautuminen: Syyskuussa järjestetään infotilaisuus, jossa voi ilmoittautua kurssille. Infotilaisuuden päivämäärä ilmoitetaan optimassa. Ilmoittautua voi myös sähköpostin kautta suoraan opettajalle [sabine.grasz\(at\)oulu.fi](mailto:sabine.grasz(at)oulu.fi).

080699A: Course for Clinical Examination of Patients, 3 op

Voimassaolo: 01.08.2008 - 31.07.2013

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Leikkaavuudet:

ECTS Credits:

3 ECTS

Language of instruction:

Finnish

Timing:

Year 3, Semesters 5 and 6

Learning outcomes:

Student gets acquainted with patient examination and after the course he/she is able to examine patients independently.

Contents:

Anamnesis and status of patient, anamnesis and status of cardiology, anamnesis and status of gastroenterology, respiratory examination and classes of medical procedures.

Learning activities and teaching methods:

Lectures 24 h

Small group classes 11 h. Attendance is compulsory.

Recommended optional programme components:

Student must pass the course in order to participate in the course of Internal Medicine I.

Recommended or required reading:

Saha H., Salonen T., Sane T: Potilaan tutkiminen (2009), Kustannus Oy Duodecim. (Book must be read before the course)

Assessment methods and criteria:

Attendance at compulsory teaching.

Written exam of clinical examination.

Grading:

pass / fail

Person responsible:

Professor Antero Kesäniemi (antero.kesaniemi@oulu.fi)

080203A: Dermatology and venereology, 5 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Oikarinen, Aarne Iisakki**Opintokohteen kielet:** English**ECTS Credits:**

5,5 ECTS credits

Timing:

C9-C10

Learning outcomes:

Objective of the course expressed in terms of learning outcomes: After this course the student has the knowledge and skills in diagnostics and treatment of common skin diseases in order to be able to work as a general practitioner or house officer. Furthermore, the student has the basic skills to diagnose and treat allergological and venereal diseases.

Contents:

Theoretical teaching: Special features of status and anamnesis. Structure of skin. Basics of local treatments. Basics of allergology. Common skin diseases and their clinical findings. Hereditary skin sideases. Dermatopathology. Venereal and paraveneal disease.. Practical teaching: Demonstrations, patient examination, small group teaching, bedside teaching, policlinic, self study (material available in the Optima)

Learning activities and teaching methods:

Theoretical teaching 49 h

1. Lectures 42 h

2. Interactive lectures 3 h

3. Examinations 4 h

Practical teaching 14 h

3. Small group teaching in the outpatient ward 6 h

4 Small group teaching in the inpatient ward 6 h

5. Consultative small group teaching 2 h

Self study 85 h

6. Self study using material available in the Optima.

Recommended or required reading:

Books: Hannuksela, M., Karvonen, J., Reunala, T., Suhonen, R. (eds.). Ihotaudit. Kustannus Oy Duodecim. Reunala T, Paavonen J, Rostila T (eds.): Sukupuolitaudit. Kustannus Oy Duodecim,. **Recommended reading:** Haahtela T., Hannuksela M., Terho, E.O.: Allergologia. Kustannus Oy Duodecim.

Assessment methods and criteria:

Initial examination in the Optima has to be passed before starting the practical teaching. The end-of-course examination: books, lectures and small group teaching. Obligatory presence in the theme day teaching of sexology and venereology.

Grading:

The end-of-course examination contains 10 questions which are graded from 0-3. Maximal grade is 30 points and the level of acceptance is 15 points. The theme day of sexology and venereology, evaluation: pass/fail.

Person responsible:

Clinical lecturer Erika Lyytikäinen (erika.lyytikainen@oulu.fi)

Other information:

Research projects / Department of Dermatology

1. Skin connective tissue and wound healing

Responsible person: Professor Aarne Oikarinen

1 or 2 student per year

2. Molecular biology of skin connective tissue diseases

Responsible person: Clinical lecturer Kaisa Tasanen-Määttä

1 student per year

3. Glucocorticoid receptors

Responsible person: Päivi Hägg, MD, PhD

1 student per year

040422S: Dermatology; from basics to clinic, 1 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Kaisa Tasanen-Määttä

Opintokohteen kielet: Finnish

Required proficiency level:

C10

ECTS Credits:

1.0 ECTS credits (28 hours)

Timing:

Spring semester March-May (C10), yearly

Learning outcomes:

Objective of the course expressed in terms of learning outcomes: After this course the student has more than basic knowledge and better skills in diagnostics and treatment of skin diseases, venereal patients and allergy

Contents:

Practical teaching; Working in the inpatient and outpatient ward (10 hours).

Theoretical teaching; Lectures (3 hours), seminar (15 hours)

Learning activities and teaching methods:

Seminar, oral presentation and learning own subject by patient examination

Recommended or required reading:

Books : Hannuksela, M., Karvonen, J., Reunala, T., Suhonen, R. (eds.). Ihotaudit. Kustannus Oy Duodecim. Reunala T, Paavonen J, Rostila T (eds.): Sukupuolitaudit. Kustannus Oy Duodecim,. **Recommended reading:** Haahtela T., Hannuksela M., Terho, E.O.: Allergologia. Kustannus Oy Duodecim. Other study material is provided by the teachers.

Assessment methods and criteria:

Grading:

pass/fail

Person responsible:

Clinical lecturer Erika Lyytikäinen

Other information:

Minimum of 6 students are required and maximum of 12 students can participate.

Students must pass Dermatology and venereology course (080203A) before applying. Election according to course grade.

040401A: Dissection, 3 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuukkanen, Kaarlo Juha Kullervo

Opintokohteen kielet: Finnish

Timing:

C1. The course is optional and organized in the end of C1.

Learning outcomes:

The learning outcomes are to understand the topographical structure of the human body.

Contents:

The course concentrates in musculoskeletal system, cardiovascular system, thorax and respiratory system, abdomen and gastrointestinal system, urinary system, pelvis and genital systems, skull and brains. The dissection course may compensate the obligatory small group teaching of extremities in the end of the anatomy course.

Learning activities and teaching methods:

The students will study the regional anatomy in advance before the following dissection sessions. The dissection is performed during 2 weeks in 4 to 6 hours sessions under supervision of the teachers.

Recommended or required reading:

The material of the anatomy study module.

Assessment methods and criteria:

Participation in all the dissection sessions is obligatory. The course is performed by cadaver dissection.

Grading:

The course is not graded.

Person responsible:

Professor Petri Lehenkari (Professor Juha Tuukkanen, leave of absence)

Other information:

The course is the same for medical and dental students.

040301S: Dissection of head and neck, 0,5 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Ei opintojaksokuvauksia.

080722A: Elective Course of Surgery, 1 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Juvonen, Tatu Sakari

Opintokohteen kielet: Finnish

ECTS Credits:

One study point

Language of instruction:

Finnish

Timing:

C 11-12 (Sixth year)

Learning outcomes:

The student will be familiar with the symptoms, diagnostics and treatment of the most usual surgical diseases.

Contents:

The repetition concerning most problems in important surgical diseases. Lessons during two days of Orthopedics, Thoracic and Vascular surgery, Pediatric surgery, Gastroenterological surgery and Urology.

Learning activities and teaching methods:

Lessons 20h

Assessment methods and criteria:

Obligatory study

Person responsible:

Professor Tatu Juvonen and professor Jyrki Mäkelä

040119Y: Environmental health care, 1 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Jouni Jaakkola

Opintokohteen kielet: Finnish

ECTS Credits:

1,5 op

Language of instruction:

In Finnish. Can be offered in English if several English speaking student registered.

Timing:

Lectures on 2. Year spring term.

Learning outcomes:

Students are expected to learn most important health effects of environmental exposures and to understand the role of physicians and other professionals in municipal environmental health.

Contents:

Thematic day in environmental health includes lectures on the following topics: 1) Environment and health, 2) Ambient air 3) Indoor environment, 3) 4chemical actors in drinking water, 5) Microbial factors in food and drinking water, 6) municipal environmental health and 7) Physicians in environmental health care.

Learning activities and teaching methods:

Participation in the thematic day and a written exam.

Target group:

Basic course for medical students, but suitable for students planning research in health sciences.

Recommended or required reading:

Lecture notes.

Textbook in English will be defined later.

Assessment methods and criteria:

The course requirements include active participation in thematic day and a written examination.

Grading:

pass / fail.

Person responsible:

Jouni J.K. Jaakkola, professor of public health.

040408S: Exercise and Work Physiology, 1 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Vuolteenaho, Olli Jaakko Tuomas

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Timing:

C 3

Learning outcomes:

After completion of the course the student is expected to know the principles and main methods of exercise physiology

Contents:

1. Physical work capacity
2. Assessment of physical strain
3. The effect of temperature on physiological functions

Learning activities and teaching methods:

Lectures (8 h), a practical (5 h), independent study (17 t)

Recommended or required reading:

Material is provided during the course

Assessment methods and criteria:

Attending the lectures and completing the practical

Grading:

No examination. Attending the lectures and practical is compulsory.

Person responsible:

Olli Vuolteenaho (olli.vuolteenaho@oulu.fi) ja Hannu Rintamäki (hannu.rintamaki@ttl.fi)

Other information:

Optional course complementing Physiology for Medical and Dental curricula

040405S: Experimental pharmacology, 1,5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Jaana Rysä

Opintokohteen kielet: Finnish

ECTS Credits:

1.5 p

Language of instruction:

Finnish

Timing:

C4

Learning outcomes:

The student will get familiar with clinical-pharmacological testing. The student will learn basic experimental protocols of pharmacological testing by participation in laboratory exercises in which the effects of drugs are studied.

Contents:

Ocular effects of drugs, measurement of pain and analgesia, cardiovascular effects of drugs, drugs that affect the activity of the central nervous system and mental alertness, the use of medicinal charcoal.

Learning activities and teaching methods:

Lectures 2 hours, 5 laboratory exercises (20 hours), a written exam.

Target group:

Medical students.

Recommended optional programme components:

The course is organized concurrent with the course of pharmacology and toxicology.

Recommended or required reading:

Lecture materials and laboratory exercise handbook.

Assessment methods and criteria:

Acceptable performance requires participation to all laboratory exercises and passing the final exam.

Grading:

The evaluation scale is pass/fail

Person responsible:

Senior assistant Jaana Rysä (jaana.rysa@oulu.fi).

Other information:

Maximum number of students is 24. The course is voluntary and is aimed at medical students.

040416S: Extension course of musculoskeletal medicine, 2 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karppinen, Jaro Ilari

Opintokohteen kielet: Finnish

ECTS Credits:

2 credits

Timing:

after C8

Contents:

On this course the students will practice clinical musculoskeletal examination by doing the tests between themselves and also using real patients.

Person responsible:

Professor Jaro Karppinen

040006Y: First aid, 1 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

1.0 study points.

Language of instruction:

Finnish.

Timing:

C 2 (First year)

Learning outcomes:

The students will know the most important lifesaving manouvers. Knows the legal points of first aid, Can do the most urgent first aid and knows how to organize the follow up. Can basic life support and resuscitation. The students are willing to continuous training in resuscitation and first aid

Contents:

Purpose of first aid and legal aspects. Cardiopulmonary resuscitation, major bleeding, shock. Airway managemen, forein bodies. Burns. Accidents an multi patient situations, estimation an priorities.

Learning activities and teaching methods:

Lectures and practicing in small groups.

Recommended or required reading:

Given during the course

Assessment methods and criteria:

Taking part into the group teaching events.

Grading:

The evaluation scale is pass/fail.

Person responsible:

Professor Seppo Alahuhta

080202A: Forensic medicine, 4 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Kortelainen, Marja-Leena

Opintokohteen kielet: Finnish

ECTS Credits:

4

Language of instruction:

Finnish

Timing:

C8

Learning outcomes:

The student gets acquainted with legislation and legal status concerning doctor and patient, learns how to write medical certificates and statements, gets acquainted with the principles of death investigation and especially investigation of unexpected and violent deaths, and gets familiar with forensic way of thinking, e.g. how to act as a medical authority.

Contents:

The organization of forensic medicine in Finland. Forensic medicine as a medical speciality. Legal status and supervision concerning doctors, complaints against doctors. Professional secrecy. Medical certificates and statements, especially forensic statements. The organization of death investigations, causes of death and circulation of death certificates. Mechanisms of death and declaration of legal death. Legal status of the deceased and his/her relatives. Sexual forensic medicine. Traffic medicine. Homicides and suicides. Fatal intoxications and deaths related to drug abuse. Molecular biology in forensic medicine. Injuries by stabbing, incisive wounds, and injuries by blunt force. Fatal firearm injuries, burns and electrical fatalities. Hypothermia, suffocation and asphyxia, fatal pressure on the neck. Drowning and decompression. Pediatric forensic medicine. Death certificates, medical examinations for driving license, medical certificate of physical assault injuries and in sexual offences, certificate after an external post mortem examination, clinical drunkenness examination.

Learning activities and teaching methods:

Lectures 28 h. Autopsy demonstrations and slide shows 8 h, medical certificates 8 h. A visit to Oulu police department 1.5 h.

Recommended or required reading:

Penttilä A, Hirvonen J, Saukko P, Karhunen P (Eds). Oikeuslääketiede . 1st edition. Kustannus Oy Duodecim 2000. The contents of the lectures, demonstrations and practical training on medical certificates.

Assessment methods and criteria:

Obligatory participation in autopsy demonstrations. Lectures, slide shows and practical training on medical certificates. Examination.

Grading:

Examination with 7 questions. The evaluation scale of each question is from 0 to 6. The evaluation scale of the examination is 0-5, according to the total sum of the 7 questions (0-42). The student will not pass the examination if two or more of the answers are graded as 0. Three examinations are arranged each year.

Person responsible:

Professor Marja-Leena Kortelainen

040108A: General Pathology, 3,5 - 5 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

4,5 op

Timing:

C3 (DC3)

Learning outcomes:

Upon completion the student should know the basic mechanisms of diseases (etiology and pathogenesis), their basic morphological, functional and clinical characteristics, and terminology related with diseases. The student should be able to recognize the most common macroscopical and microscopical features of diseases and be able to reason the relationship between these features of the diseases and their symptoms and other clinical manifestations.

Contents:

Cellular adaptation; cell and tissue injury; genetic and environmental causes of diseases; infections and immunological mechanisms in disease; inflammation; healing; disorders of fluid balance and circulation; basic pathology of neoplastic diseases; basics of medical post-mortem investigation.

Learning activities and teaching methods:

Lectures 23 hours, practicals 33 hours. Self study. Written examination 3 hours.

Target group:

Medical and dental students.

Recommended or required reading:

Books: Underwood JCE: General and systematic pathology, 4th ed. (2004; sections: Basic pathology and General disease mechanisms); or Kumar V. et al.: Robbins Basic Pathology, 8th ed. (2007, or 7th ed. 2003). Alternatives: Kumar et al.: Robbins and Cotran, Pathologic basis of disease, 7th ed. (2005); Rubin & Strayer; Rubin's Pathology (2005). In Finnish: lecture handouts; Guidebook for microscopy practicals; Guidebook for autopsy practicals. Web-based material (in Finnish): http://www.medicine oulu.fi/pato/opetus/YP_ATK_JOHDANTO.htm

Assessment methods and criteria:

The course requirements include participation in the compulsory practicals and passing in the end-of-course examination.

Grading:

The evaluation scale is 1-5/fail.

Person responsible:

Professor Ari Ristimäki

080417A: General Practitioner and Public Health, 9,5 op

Voimassaolo: 01.08.2007 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Markku Timonen

Opintokohteen kielet: Finnish

ECTS Credits:

9,5 study credits

Timing:

Semester 11 (C11)

Learning outcomes:

The student will understand the principles of health at population level, and as applicable to a particular disease. The student will have knowledge of the most important public health schemes and programmes, and is able to apply them at a local level.

The student will know the principles and organisation of insurance and rehabilitation medicine, and is able to apply their knowledge into clinical practice. The student will understand the aetiological factors of disease both at an individual and population level and is competent at diagnosis and management of the common diseases.

The student is able to critically assess and interpret findings of public health research, and to act as an expert of preventative medicine in primary care. The student will learn the ability to adopt and apply methods of health promotion and disease prevention at an individual-, family-, and population level, therein also considering the expertise role of the multidisciplinary team.

Student will have an appreciation of the doctor-patient relationship and the role of communication between family members as applicable to patient management, and is able to use and apply communication skills in different clinical scenarios. The student is able to evaluate the quality and economics of all his/her work.

Contents:

Population health, health promotion and recognising health problems; preventative medicine; encouragement of health behaviour that will promote health. Epidemiology, social- and health service and economics as part of patient management. Medical law, application of social security law in clinical practice, medical certificates and medical statements. Introduction to rehabilitation, environmental medicine and nutrition at population level. Team working with expert members of the multi-disciplinary team.

Learning activities and teaching methods:

Lectures, theme days, seminars and workshops. One-week practical training module at a primary health care centre, which includes a set of learning tasks.

Recommended or required reading:

Koskenvuo K. (toim) Sairauksien ehkäisy. Duodecim 2003, soveltuilta osin; Yleislääketiede, Kumpusalo E, Ahto M, Eskola K, Keinänen-Kiukaanniemi, S, Kosunen E, Kunnamo I, Lohi J (toim) Kustannus Oy Duodecim 2005, soveltuilta osin; Laki potilaan asemasta ja oikeuksista 17.8.1992/785; Laki terveydenhuollon ammattihenkilöistä 28.6.1994/559; Sosiaali- ja terveysministeriön asetus potilasasiakirjojen laatimisesta sekä niiden ja muun hoitoon liittyvän materiaalin säilyttämisestä. 99/2001; SosTMA lääkkeen määräämisestä 726/2003; L sähköisestä lääkemääräyksestä 2.2.2007/61; a SosTMA sähköisestä lääkemääräyksestä 25.6.2008/485.

Availability of course materials can be checked here.

Assessment methods and criteria:

Written examinations. Participation in seminars, workshops, theme days and practical training module at a primary health care centre.

Grading:

Medical law exam will be graded as pass/fail. Final grade of this course will consist of final written exam and seminar assessment, the latter graded on a scale of 0 to 5. The final grade will be calculated as 2/3 of the grade from final exam + 1/3 seminar grade. Final exam will contain a medical certificate, graded as pass / fail.

Person responsible:

Professor Markku Timonen

Other information:

The course forms part of the following learning modules of public health and general practice: 1) disease prevention and health promotion 2) multidisciplinary leadership and management 3) examination and management of the patient 4) effect-based contributions to the society & rehabilitation and social security, and 5) research knowledge and skills & interpretation and application of research (Appendix 4).

040015Y: Health Care Ethics, 1 - 3,5 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

Language of instruction:

Finnish

Timing:

Part 1: 1st year spring term

Part 2: 4th year spring term

Part 3: 6 th year autumn term

Learning activities and teaching methods:

Part 1: Lectures 3 x 90 min, 1 small group meeting with tutor

Part 2: Lectures 1 x 90min and theme day

Part 3: Lectures 1 x 90min and theme day

Recommended or required reading:

[Lääkäriin etiikka](#) (2005) Finnish Medical Association (in Finnish). In addition other scientific literature according to student's choice.

Assessment methods and criteria:

Part 1: Lectures, small group meetings, learning diary

Part 2: Lectures and theme day

Part 3: Lectures and theme day

Grading:

Pass/fail

080415A: Health centre practice, 4,5 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Markku Timonen

Opintokohteen kielet: Finnish

ECTS Credits:

4,5 study credits

Timing:

Semester 10 (C10)

Learning outcomes:

The student is able to use history taking and clinical examination as primary sources of information, and to use information obtained from these to request appropriate further examinations and tests. The student is familiar with the main examination and management strategies used in general practice, and understands the role which the probability of disease has for the selection of a management strategy.

The student gains experience in: management of a range of clinical problems which present to primary care; coordination and organization of treatment; and working using a patient-centred approach.

The student gains insight into: disease prevention and health promotion in paediatric, antenatal-care and school-based health care settings; main examination and treatment strategies in general practice; issuing expert statements in matters of social security system, rehabilitation and employment; time management and coordination of clinical work in primary care; multidisciplinary team work.

Contents:

Theoretical learning of the "key principles" of general practice. Practical learning in different areas of general practice: scheduled and acute appointment at the health centre; antenatal- and maternity-, paediatric-, family-planning- and school services, inpatient care on the health care centre wards, inpatient care on long-term wards, community care, and occupational health care.

Learning activities and teaching methods:

Lectures (16 hours), group work (6 hours), practical module in health care centres (2 weeks).

Recommended or required reading:

Recommended literature: Kumpusalo E, Ahto M, Keinänen-Kiukaanniemi S, Kosunen E, Kunnamo I, Lohi J (toim.): Yleislääketiede, Kustannus Oy Duodecim, Karisto Oy Hämeenlinna 2005, sections of content as applicable to this learning module.

Availability of course materials can be checked here.

Assessment methods and criteria:

Participation in group work and practical training module is mandatory.

Grading:

pass / fail

Person responsible:

Professor Markku Timonen

Other information:

The course starts in its current form in academic year 2010-2011.

The course forms part of the following learning modules of public health and general practice: 1) disease prevention and health promotion 2) multidisciplinary leadership and management 3) examination and management of the patient 4) Rehabilitation and social security 5) research knowledge and skills & interpretation and application of research (Appendix 4).

080700A: Infectious diseases, 5 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Timo Hautala

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS

Language of instruction:

Finnish

Timing:

Year 4, Semester 7

Learning outcomes:

After this course the student is able to treat common infectious diseases. The student learns problem solving and critical thinking skills and is able to study the field independently.

Contents:

Most common infectious diseases and treatments.

Learning activities and teaching methods:

1. Lectures 20 h.
2. Small group classes 2 h. Attendance is compulsory.
3. Seminars 4 h. Attendance is compulsory.

Recommended optional programme components:

Student must have completed preclinical studies.

Recommended or required reading:

- Huovinen P., Meri S., Peltola H., Vaara M., Valtonen V. (toim.): Mikrobiologia ja infektiosairaudet, osa I (2003), Kustannus Oy Duodecim
- Huovinen P., Meri S., Peltola H., Vaara M., Valtonen V. (toim.): Mikrobiologia ja infektiosairaudet, osa II (2003), Kustannus Oy Duodecim

Assessment methods and criteria:

Attendance at compulsory teaching. Exam of infectious diseases.

Grading:

pass / fail

Person responsible:

Dr. Timo Hautala (timo.hautala@oulu.fi)

080711A-13: Internal Medicine, final examination, 0 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS

Language of instruction:

Finnish

Timing:

Year 6, Semester 11

Learning outcomes:

This course gives the student advanced knowledge in internal medicine and skills of critical thinking. The student is able to treat the patients appropriate way in health care system. The student understands the significance of different levels of health care.

Contents:

Essential issues of internal medicine and geriatrics.

Learning activities and teaching methods:

Internal medicine

1. Lectures 9 h.

2. Seminars 6 h. Attendance is compulsory.

Geriatrics

1. Small group classes 2 h. Attendance is compulsory.

2. Seminars 16 h. Attendance is compulsory.

Recommended optional programme components:

Student must have completed the course of Internal Medicine I.

Recommended or required reading:

Tilvis, R, Hervonen A, Jäntti P, Lehtonen A, Sulkava A: Geriatria (2001), Kustannus Oy Duodecim

Assessment methods and criteria:

Attendance at compulsory teaching. Final exam of internal medicine.

Grading:

Exam consists of eight short essays. Six points is maximum / essay. Exam is failed if the total points are less than 20 or if one of the essays is worth of 0 points.

The final grade of internal medicine consists of the final exam and the exams of endocrinology and metabolic diseases, cardiology and ECG, kidney diseases, haematology, rheumatology and gastroenterology.

Proportion of final exam is 50% and proportion of smaller exams is 50% in the final grade of internal medicine.

Total points of exams and the grading scale:

51.7 -60.0 # 5, 43.4 - 51.6 # 4, 35.1 - 43.3 # 3, 26.8 - 35.0 # 2,

18.5 - 26.7 # 1.

Person responsible:

Professor Antero Kesäniemi (antero.kesaniemi@oulu.fi)

080711A: Internal medicine I, 4,5 - 21 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

15 ECTS

Language of instruction:

Finnish

Timing:

Year 3, Semesters 5 and 6

Learning outcomes:

After this course the student is familiar with diseases of internal medicine as well as diagnostics and treatment of these diseases. The student understands the connection between internal medicine and other medical specialities. The student learns independent problem solving and critical thinking and also to cooperate with healthcare professionals.

Contents:

Endocrinology and metabolic diseases, cardiology, ECG, kidney diseases, haematology, rheumatology, gastroenterology and emergencies in internal medicine.

Learning activities and teaching methods:

1. Lectures 81 h
2. Patient history and physical examination. Student writes accurate anamnesis and status of six patients that he/she has examined carefully.
3. Guided medical procedures and examinations. Carried out in small group classes and in ward practice.
4. Small group classes 24 h. Student participates in small group classes in various wards. Each class lasts 2 hours. Attendance is compulsory.
5. Practice in outpatient clinic 4 h. Attendance is compulsory.
6. Practice in the Department of Emergency (Internal Medicine) 3 x 6 h. Attendance is compulsory.
7. Ward practice 80 h. Organised in two one week sessions. Attendance is compulsory. Part of practice is carried out in the hospitals of Northern Finland.
8. Seminars 53 h. Problem-oriented discussions about wider thematic entities. Attendance is compulsory.

Recommended optional programme components:

Student must have completed preclinical studies and propedeutics of internal medicine.

Recommended or required reading:

- Axford John S.: Medicine, 2nd Edition, (2004)
- Elonen E., Mäkijärvi, M., Vuoristo, M.: Akuuttihoito-opas (2008), Kustannus Oy Duodecim
- Mustajoki P., Saha H., Sane T.: Potilaan tutkiminen (2003), Kustannus Oy Duodecim.

Recommended reading:

- Vauhkonen I & Holmström P.: Sisätaudit (2006), Kustannus Oy WSOY (Recommended reading before the course)
- Heikkilä J., Mäkijärvi M.: EKG (2003), Kustannus Oy Duodecim
- Heikkilä J., Kupari M., Airaksinen J., Huikuri H., Nieminen M., Peuhkurinen K.: Kardiologia (2008), Kustannus Oy Duodecim
- Höckerstedt K., Färkkilä M., Kivilaakso E., Pikkarainen P.: Gastroenterologia ja hepatologia (2007), Kustannus Oy Duodecim
- Koskenvuo K. (toim.): Sairauksien ehkäisy (2003), Kustannus Oy Duodecim
- Leirisalo-Repo M., Hämäläinen M., Moilanen E.: Reumataudit (2002), Kustannus Oy Duodecim
- Ruutu T., Rajamäki A., Lassila, R, Porkka, K.: Veritaudit (2007), Kustannus Oy Duodecim
- Mäkijärvi M, Parikka H, Raatikainen P, Heikkilä J: EKG-tulkinnan työkirja (2006) Kustannus Oy Duodecim
- Thaler M.: The only EKG book you'll ever need. 4th ed (2003). Lippincott Williams & Wilkins
- Välimäki M., Sane T., Dunkel L.: Endokrinologia (2000), Kustannus Oy Duodecim

Assessment methods and criteria:

Attendance in compulsory teaching.

Exams of endocrinology and metabolic diseases, cardiology and ECG, kidney diseases, haematology, rheumatology and gastroenterology.

Grading:

Grading scale in exams is 1-5 and the lowest accepted points are 20/40.

Person responsible:

Professor Antero Kesäniemi (antero.kesaniemi@oulu.fi)

040117Y: Interviewing and examining patients, 4 op

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Markku Timonen

Opintokohteen kielet: Finnish

ECTS Credits:

2.5 credits

Language of instruction:

Finnish

Timing:

C4, autumn term

Learning outcomes:

The objectives of the study module are that a student gets acquainted with holistic patient-orientation, both doctor- and patient- centered communication, interprofessional collaboration in the work of doctor and dentist, as well as clinical examination of patients.

Contents:

The course includes introduction to basic concepts of doctor-centered and patient- centered communication, as well as clinical examination of patients.

Learning activities and teaching methods:

Start seminar, exercise session for doctor-patient communication, practical period in health care center (3 days), and closing work-shop.

Recommended or required reading:

Kumpusalo E, Ahto M, Eskola K, Keinänen-Kiukaanniemi S, Kosunen E, Kunnamo I, Lohi J (ed.): Yleislääketiede, Kustannus Oy Duodecim, Karisto Oy, Hämeenlinna 2005. Pages 93-104, 105-115 and 116-123. Campbell, T.L. & Larivaara, P. 2004. Working with Families in primary care. Teoksessa: Jones R & ym. (ed.). Oxford Textbook of Primary Medical Care. Oxford University Press, 2004 s. 299-303. Larivaara, P, & Taanila, A. Towards interprofessional family-oriented teamwork in primary services:evaluation of an education programme. Journal of Interprofessional Care, 2004, 18/2:153-163. Mustajoki, P., Saha, H. & Sane, T. (ed.): Potilaan tutkiminen. Kustannus Oy Duodecim, Saarijärvi 2003. Pages 7-64.

Assessment methods and criteria:

Participation in the start seminar, exercise session for doctor-patient communication, practical period in health care center (3 days), and in closing work-shop.

Grading:

Accepted/fail

Person responsible:

Professor Markku Timonen

Other information:

Included in the study modules of the Public Health Science and General Practice, 3) Clinical examination and treatment, 4) Rehabilitation and social care

040013Y: Introduction to Medical Studies, 2 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Olli Vainio

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS-credits

Language of instruction:

Finnish

Learning outcomes:

Part 1: Introduction to university studies (1. semester): Student knows the structure and goals of the medical education, and orientates to the University of Oulu and Faculty of Medicine as a learning environment.

Part 2: Teacher tutorial (semesters 2-12): Student is able to plan the progression of studies, and builds up his/her professional identity and expertise in medicine.

Contents:

Structure and goals of the medical education, personal study plan, the University of Oulu and the Faculty of Medicine as a learning environment, studying at the university, and becoming a doctor.

Learning activities and teaching methods:

Lectures, small group meetings, peer and teacher tutoring, planning and evaluating a personal study plan, independent studying.

Recommended or required reading:

Study guide for the Degree Programme in Medicine and University's [Guide for Degree Students](#).

Assessment methods and criteria:

Introduction to university studies: active participation to peer tutoring, writing a personal study plan.

Teacher tutorial: active participating to teacher tutoring and evaluation of the personal study plan.

Grading:

pass / fail

Person responsible:

Academic coordinator Soile Paasovaara

040007Y: Introduction to scientific research, 1,5 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Pentti Nieminen

Opintokohteen kielet: Finnish

ECTS Credits:

1,5 credits

Timing:

C2

Learning outcomes:

By the end of the course the student will have practiced the following skills:

- understanding scientific research process
- obtaining data
- exploring research methods and analyzing data
- reporting research findings in medical and dental journals

Contents:

Scientific communication, study planning, study designs, analyzing research data and reporting. Special points in medical research: ethics in research, regulations in clinical research and use of animals in scientific research.

Learning activities and teaching methods:

Lessons 10 h, participation in the Faculty of Medicine Science Day 6 h and homework tasks 18h.

Assessment methods and criteria:

Participation in the Faculty of Medicine Science Day and completion of homework.

Grading:

Pass/Fail

Person responsible:

Docent Pentti Nieminen

Other information:

This course is a part of the studies in research skills.

040419S: Management of acute pain - simulation training, 0,5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

0,5 op

Timing:

C 8

Learning outcomes:

The students learn that the management of emergencies requires good communication, leadership and team work besides knowing clinical guidelines.

Contents:

The students will practice clinical skills as a group in emergency situations.

Learning activities and teaching methods:

Simulation training will be carried out in groups of 3-4 students and it includes introduction, simulation scenario and debriefing.

Recommended or required reading:

Handout

Assessment methods and criteria:

Participation in simulation training.

Grading:

Participation in simulation training.

Person responsible:

Professor Seppo Alahuhta

040300A: Maturity exam (native language), 0 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Outi Mikkola

Opintokohteen kielet: Finnish

Contents:

Student writes an essay in his/her native language about the topic of the thesis to show a good command of the language and the content of the thesis. If the student's native language is another than Finnish or Swedish the Faculty will define separately the requirements for the language test.

Learning activities and teaching methods:

Writing an essay.

Assessment methods and criteria:

The essay is examined first by the supervisor of the thesis and then by the language teacher.

Grading:

Pass / fail

040103A: Medical Biochemistry and Molecular Biology, 14 - 15 op

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

14 ECTS

Timing:

C2

Learning outcomes:

Aim of this module is to learn the function of the cells at the molecular level and recognize the basic biochemical compounds, reactions and the overall regulation of various metabolic pathways, especially those which are meaningful for Medicine. Students will also learn the basics of molecular biology and common methodology used in molecular biology.

Contents:

Structure of carbohydrates, amino acids, lipids and nucleic acids; metabolism of the carbohydrates, amino acids, lipids and nucleic acids; porphyrins and bile pigments; vitamins; minerals; prostaglandins; thromboxanes; leukotrienes; nutrition; DNA synthesis and repair mechanisms; structure of chromosomes and genes; regulation of gene expression; RNA synthesis, species and functions; protein synthesis and genetic code; posttranslational modifications and processing of proteins; recombinant DNA technology; stem cells; oncogenes; growth factors;

mitochondrial DNA and diseases; intracellular messengers; energy metabolism; hormones; hypoxia response of the cells; cell membranes; components and function of extracellular matrix. Laboratory works (5 different works) include basics of enzyme kinetics, mitochondria and oxidative phosphorylation, lipids, carbohydrates and hormonal regulation of lipolysis.

Learning activities and teaching methods:

Lectures 124 h. Laboratory work including tutorial teaching and verbal evaluation, 5 works and 24 h. Theme day containing preliminary preparations 9 h.

Recommended or required reading:

Oppikirja: Murray, R.K. (toim.): Harper's Illustrated Biochemistry, 27. painos, 2006.

Text book: Murray, R.K. (ed.): Harper's Illustrated Biochemistry, 27th edition, 2006.

Assessment methods and criteria:

Medical biochemistry and molecular biology course includes 4 different intermediate exams (4 essays, 0-2.5 p /essay, points needed for passing 4.75). Final exam consist of 6 essays (0-10 p/essay). In final exams only 2 essays from 6 can have points lower than 4.5, otherwise exam will be failed. All the intermediate exams and laboratory works should be passed before participation in final exam.

Grading:

5 = 50.75 or more, 4 = 44.75-50.5, 3 = 38.75-44.5, 2 = 32.75-38.5, 1 = 27.75-32.5.

Person responsible:

Professor Johanna Myllyharju

903007Y: Medical German Text Workshop, 1,5 op

Voimassaolo: 01.08.1995 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Language Centre

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: German

Ei opintojaksokuvauksia.

040414S: Medical autopsy pathology, 4 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Mäkinen, Markus Juhana

Opintokohteen kielet: Finnish

ECTS Credits:

4 credits

Timing:

3rd year spring or later.

Learning outcomes:

Aims of the course include to develop competence in the recognition of structural abnormalities, to assess their clinical significance, to gain knowledge about the indications, implementation and significance of autopsy. Upon completion, the student should be able to critically assess clinical information in the preliminary determination of the cause of death and in the selection of the way how the cause of death is determined; should know the basic autopsy techniques; should be able to interpret the most common macroscopical and microscopical autopsy findings and assess their severity, background, relationship with each other, and their significance as causes of death; should know the most important risks related with autopsies; should know the basic aspects of legal significance of autopsies; should know the significance of autopsy in the public health service, in the epidemiology, and in the development of medicine.

Contents:

History of autopsy. Basic autopsy techniques. Assessment and clinical correlation of macroscopical and microscopical findings in autopsy. Autopsy in infectious diseases and basic hygiene precautions in the laboratory of pathology. Pediatric and neuropathologic autopsies.

Learning activities and teaching methods:

Lectures 4 hours, practicals 46 hours. Self study.

Target group:

Medical students.

Recommended optional programme components:

General pathology (040108A) and Organ pathology part I (080211A-01).

Recommended or required reading:

Finkbeiner et al. Autopsy Pathology - a Manual and Atlas, 2004; Mäkinen M, Infektioiden torjunta patologian osastolla, s 579-584 in book: Infektioiden torjunta sairaalassa, 2005.

Assessment methods and criteria:

The course requirements include participation in the compulsory practicals.

Grading:

The evaluation scale is accepted/fail.

Person responsible:

Lecturer Markus Mäkinen

040112Y: Medical biophysics, 2,5 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Weckström, Matti Tapani

Opintokohteen kielet: Finnish

Ei opintojaksokuvauksia.

040002Y: Medical cell and developmental biology, 7 op

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuukkanen, Kaarlo Juha Kullervo

Opintokohteen kielet: Finnish

ECTS Credits:

7 credit points

Timing:

C1

Learning outcomes:

The learning outcomes are to identify the structure of various cell types (especially mammalian cells), the structure and function of cell organelles, cell growth and cell division and the principles of the regulation of cell function, genetic regulation and the common research techniques in cell biology. The student should understand gametogenesis, fertilization, embryonal development (0-40days) and its regulation as well as the development of embryonal malformations. The student should also understand the human growth and development. In addition, the student should learn the basic tissues of the human body and the microscopic structure of the tissues for understanding their normal and pathological function.

Contents:

Cell evolution and cell biology, human embryonal development (embryology), basic tissues which make up the organs (histology).

Learning activities and teaching methods:

Lectures 54 h and small group exercises 15 h

Recommended or required reading:

A.L. Kierszenbaum: Histology and Cell Biology: an introduction to pathology. Mosby, St Louis, (the latest edition), or J. Heino, M. Vuento: Biokemian ja solubiologian perusteet. WSOY oppimateriaalit, 1. edition (2007)

B. Young, J.S. Lowe, A. Stevens, J.W. Heath: Wheater's Functional Histology, A Text and Colour Atlas. Elsevier, Churchill Livingstone (or similar Atlas of Histology)

T.W. Sadler: Langman's Medical Embryology. Williams&Wilkins co, Baltimore

Additional material among the following books: 1) M. Niemi, K. Väänänen: Ihmisyksilön kehitysbiologia. Kustannus Oy Duodecim, 1993 2) H. Sariola, M. Filander, T. Heino, J. Jernvall, J. Partanen, K. Sainio, M. Salminen, I. Theseleff: Solusta yksilöksi, Kehitysbiologia. Kustannus Oy Duodecim, 2003

Web material:

<http://www.solunetti.fi> histology, pathology and embryology (partly under construction)

<http://www.thieme.com/dyn/ebooklibrary/index.php>

many atlas books, free access from the computers in the internet domain of Oulu University. Handouts of the lectures and practicals.

Assessment methods and criteria:

Participation in the small group practicals. The study module includes final examination . Medical cell and developmental biology and histology together with the study module of Anatomy will make the final grade of Anatomy. (See Anatomy study module)

Grading:

See Anatomy

Person responsible:

Professor Petri Lehenkari (Professor Juha Tuukkanen, leave of absence)

Other information:

Medical and dental students have the same study module .

The students in Medical and Wellness Technology have the same study module in extent of 5 credit points when participating in the lectures (54 h), one microscopy practical and the examination.

040011Y-01: Medical informatics, module 1, information and Communication Technology, 0,5 op

Opiskelumuoto: General Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Paadar, Matti Reino Isak

Opintokohteen kielet: Finnish

Timing:

C1

Learning outcomes:

By the end of the course the student will have practiced the following skills:

- using information and communication technology resources in the University of Oulu,
- using workstations available in the Medical Faculty,
- applying basic software necessary in the studies

Contents:

Workstations, information security and confidentiality, networks, office software

Learning activities and teaching methods:

Lectures 2 h, group work in computer class-room 6-8 h and completion of a practical project 4 h. Group works include practical work with the university network, web-learning environment and software installed in the workstations.

Assessment methods and criteria:

Regular and active participation in the small group lessons and completion of a practical project.

Grading:

Pass/Fail

Person responsible:

Docent Pentti Nieminen

Other information:

This course is a part of the studies in research skills.

040011Y-02: Medical informatics, module 2, literature retrieval, 1 op**Opiskelumuoto:** General Studies**Laji:** Partial credit**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Pentti Nieminen**Opintokohteen kielet:** Finnish**Learning outcomes:**

By the end of the course the student should be able to:

- search research articles using basic literature retrieval methods
- use bibliographic databases available at the Medical Faculty

Contents:

. Library information systems, 2. Medical and dental publications, 3. Scientific online journals, 4. Medline, 5. Medic, 6. Scopus, 7. Cochrane, 8. Electronic books, 9. Reference management software.

Learning activities and teaching methods:

Lectures 4 h, group lessons in computer class-room 9 h and completion of practical projects 10 h.

Assessment methods and criteria:

Regular and active participation in the small group lessons and completion of practical projects.

Grading:

Pass/Fail

Person responsible:

Docent Pentti Nieminen

Other information:

This course is a part of the studies in research skills.

040011Y-03: Medical informatics, module 3, clinical information systems, 0,5 op**Opiskelumuoto:** General Studies**Laji:** Partial credit**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Pentti Nieminen**Opintokohteen kielet:** Finnish**ECTS Credits:**

0,5 credits

Timing:

C5

Learning outcomes:

By the end of the course the student will have practiced the following skills:

- providing clinical knowledge
- using electronic patients information systems
- using health care classification systems
- using workstations and network for clinical work

Contents:

Medical databases, critical appraisal of medical research article, electronic patients records and information systems.

Learning activities and teaching methods:

Lessons 12 h and completion of a practical project.4 h.

Assessment methods and criteria:

Regular and active participation in the lessons and completion of a practical project.

Grading:

Pass/Fail

Person responsible:

Docent Pentti Nieminen

Other information:

This course is a part of the studies in research skills

080005Y: Medical latin, 1,5 op**Opiskelumuoto:** Language and Communication Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Timo Sironen**Opintokohteen kielet:** Finnish**ECTS Credits:**

1 study point.

Timing:

Spring term

Learning outcomes:

The ability to understand Latin terminology, especially in anatomy and diagnostics. During the course, students will be introduced to the structures of Latin, as well as the inflection of nouns and adjectives. After completing the course, students will be more familiar with the vocabulary of medical Latin. They will also be able to use Latin correctly in their work.

Contents:

Pronunciation of medical Latin. Inflection of nouns and adjectives. Adjective and genitive attributes. Prepositions. Terminology in anatomy and diagnostics. Basic vocabulary in anatomy and medicine.

Learning activities and teaching methods:

Lectures 10 h

Recommended or required reading:

Hand-outs. The following books are recommended but not necessary: Pitkäranta Reijo ja Mikkonen Laura: Lääketieteen sanakirja latina-suomi-latina WSOY, 2009. Pekkanen Tuomo: Ars grammatica - latinan kielioppi 2004. Pitkäranta Reijo: Latina medicorum, Latinaa lääkäreille 1980.

Assessment methods and criteria:

80 % compulsory attendance and exam.

Grading:

Pass / fail

Person responsible:

Dr. Timo Sironen. The course teachers are Mika Nevalainen (BM) and Jukka Ahola (BA)

Other information:

50 students are admitted to the course. The course will be convened if 20 or more students enrol. The course is a joint project between the Department of Anatomy and the Faculty of Humanities

080001Y: Medical rescue work, 4 - 5 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Alahuhta, Seppo Matias**Opintokohteen kielet:** Finnish**ECTS Credits:**

1.5 study points.

Language of instruction:

Finnish

Timing:

C 11&12 (Sixth year)

Learning outcomes:

The students have knowledge of doctors duty and role in mass accidents. Can do triage. Is motivated to continuous learning and training in emergency medicine.

Contents:

General organisation of rescue work and doctors role in it. Medical rescue work planning and the role of continuous training. Triage. Refreshing of resuscitation skills.

Learning activities and teaching methods:

Lectures, theme days, practicing in small groups, simulation.

Recommended or required reading:

Given during the course

Assessment methods and criteria:

Taking part into themetheme days, group teaching events and simulation.

Grading:

The evaluation scale is pass/fail.

Person responsible:

Professor Seppo Alahuhta

040117A: Microbiology: Medical microbiology and immunology, 9,5 op

Voimassaolo: - 31.12.2010

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Olli Vainio

Opintokohteen kielet: Finnish

ECTS Credits:

9.5 ECTS credits

Language of instruction:

Finnish

Timing:

C4 , 2nd year spring.

Learning outcomes:

Upon completion, the student masters the basic knowledge of infectious diseases causing microbes, their characteristics and study methods, and the body's immunological defence mechanisms.

Contents:

Bacteriology: Basics, concepts and research methods of bacteriology. Basic knowledge of bacteria causing infectious diseases.

Mycology and parasitology: Basic knowledge of fungi and parasites causing diseases.

Virology: Virology basics, concepts and diagnostic principles. Basic knowledge of viral diseases, prevention and treatment possibilities.

Immunology: Basics and concepts of the immunological defence mechanisms and tissue damage types.

Microbiological and immunological methods and diagnostic methods.

Learning activities and teaching methods:

Lectures, laboratory work, team learning and essay.

Recommended or required reading:

Mikrobiologia ja infektiosairaudet. Huovinen, Meri, Peltola, Vaara, Vaheri, Valtonen (toim.), kirja I ja II, latest edition, Duodecim.

Supplementary material from lectures.

Microbiology laboratory exercise book (Finnish).

Assessment methods and criteria:

Participation in the compulsory teaching (laboratory work and team work). Essay writing.

Grading:

Learning is estimated by two equal examinations. Rating is determined based on exams. Rating scale 5-1/fail.

Person responsible:

Professor Olli Vainio

040434S: Molecular developmental biology, 2 op

Voimassaolo: 01.08.2007 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Vainio Seppo

Opintokohteen kielet: Finnish

ECTS Credits:

2 op

Timing:

Spring, After the lecture series of the medical biochemistry and molecular biology

Learning outcomes:

The aim of the lecture series is to obtain a general view of the cellular and molecular mechanisms that regulate embryonic development.

Contents:

The student will study the main developmental processes such as formation of the morula, blastula, gastrula and neurula stage embryos but also steps taking place during organogenesis. In addition to these steps we will get familiar to the various stem cell systems and how the processes relevant for embryogenesis are studied experimentally.

Learning activities and teaching methods:

Lecturing and personal studies of the student where she or he is studying the main steps taking place during development. 13.5 hrs of teaching (6 x 2 hr lectures, and 1.5 hr exam).

Recommended or required reading:

The power points slides presented during the lecture + Text book: Gilbert, S.F: Developmental Biology, 8th edition, 2006, from its suitable parts.

Assessment methods and criteria:

Final written exam

Grading:

1-5

Person responsible:

Professor Seppo Vainio

040406A: Most recent topics in child psychiatry, 2,5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Irma Moilanen

Opintokohteen kielet: Finnish

Learning outcomes:

To increase the knowledge of the fastest developing areas of the child psychiatry

Contents:

The students attending the course will choose together one of the following themes:

- 1) infant psychiatry
- 2) forensic child psychiatry
- 3) developmental neuropsychiatry
- 4) psychotherapeutic treatments

The theme that is chosen is implemented on the term in question.

Learning activities and teaching methods:

- 1) Lectures
- 2) Independent studying
 - every student agrees with the lecturer a special theme of which he/she makes an essay
- 3) Seminar:
 - the representation of the own essay
 - opposing the essays of the other students

Recommended or required reading:

The literal material is distributed at the beginning of the course

Assessment methods and criteria:

Literal essay and attending to the compulsory teaching

Grading:

Approved / failed

Person responsible:

Professor Hanna Ebeling (hanna.ebeling@ppshp.fi)

Other information:

The course is implemented only if there are at least 5 participants and the maximum number of participants is 12

The participating is possible after preclinical courses

080301A: Neurology, 6 - 6,5 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Majamaa, Kari Gunnar

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

6.5 credits in ECTS

Language of instruction:

The main course and lectures will be given in Finnish. The neurology course offered for the exchange students is modified from and partly overlaps with that offered for the Finnish students. In the Finnish curriculum the neurology course is in the fourth year of medical education (i.e. second year of clinical education). Two seminars and five demonstrations will be held in English.

Timing:

0.5 credits in the autumn term of the 3rd year (August-September)

6.0 credits in the spring term of the 4th year (January-May)

Learning outcomes:

The course focuses on pathogenesis, diagnostics, treatment and prevention of common neurological diseases and rehabilitation of neurological patients. After completing this course the student should

- be able to carry out the neurological examination of the patient;
- be familiar with the diagnosis and management of common neurological illnesses;
- be familiar with ancillary investigations that are used for neurological evaluation;
- be familiar with current developments in the clinical neurosciences.

Contents:

The neurology course consists of a foundation course on clinical neurological examination and the main neurology course. Lectures will be given in Finnish and are voluntary. Small group sessions will be held in outpatient neurology clinic, neurology ward, rehabilitation ward and the department of clinical neurophysiology. Each student also participates in the clinical evaluation of patients at the emergency department and at the neurology ward. Attendance is mandatory in small group sessions and emergency service. Course also includes seminars, three of them are mandatory. There will be a written exam after the foundation course and a written final exam in the end of the course.

Learning activities and teaching methods:

Neurology course consists of the following activities

Lectures 38 h

Foundation course of clinical neurological examination 6h

Small group sessions at the outpatient clinic, neurology ward, rehabilitation ward and department of clinical neurophysiology 14h

Service at neurology ward 12h
 Emergency unit service 4h
 Seminars 24h

Recommended or required reading:

Soinila S, Kaste M, Somer H (eds.): Neurologia (2. Ed.). Duodecim, Helsinki 2006.

Assessment methods and criteria:

Mandatory small group sessions and clinical examination of patients in neurology ward and emergency department, three seminars and passed examinations.

Grading:

An interactive examination will be after the foundation course. The requirements of this exam include chapters 1-2 in the textbook (Soinila, Kaste, Somer: Neurologia), lectures on clinical neurological examination and small group sessions about clinical neurological examination. The evaluation is passed/failed.

A written final examination consists of five questions. The requirements of the final exam include the textbook, issues raised in the lectures, small group sessions and seminars. Zero points is allowed only in one question. In order to pass the exam the student must obtain half of the total points. The evaluation scale is 0-5 (0=fail, 5=excellent).

Person responsible:

Prof. Kari Majamaa

080304A: Neurosurgery, 3 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

3.0 ECTS

Timing:

C8

Learning outcomes:

After the course student has knowledge of the clinical manifestations, diagnostics and treatment of neurosurgical diseases from the general practitioners point of view. The student can evaluate the urgency of treatment of neurosurgical conditions and understands the life-threatening nature of these diseases.

Learning activities and teaching methods:

Lectures (14h) including patient demonstrations. Mandatory small group patient rounds and discussion /8h). Four symposia.

Recommended or required reading:

Neurosurgical hand-out: Ukkola Veijo, Koivukangas John, Heikkinen Esa, 50 pages (also available in the internet). Lindsay-Bone: Neurology and Neurosurgery Illustrated, latest edition.

Grading:

Final examination (6 essay and multiple choice questions). At least half of the total points are needed to pass the test, and minimum of 1 point per question must be achieved. One month of clinical internship can enhance the grade.

Person responsible:

Professor John Koivukangas

Other information:

Alternatively, international students can also get full ETCS credits through the Erasmus program clinical elective. This requires full time (8.00 am - 3.45 pm) participation in all clinical activities for a minimum of four weeks. For ETCS credits the above textbook final examination must be passed: it is usually taken during the last week of practice.

080510A: OSCE, 0 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Uhari, Matti Kalervo

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

0.0 op

Language of instruction:

Finnish/English

Timing:

5th year spring

Learning outcomes:

To assess the abilities of student performance on the subjects of the 5th year curriculum.

Contents:

A joined examination of the subjects on the fifth year.

Learning activities and teaching methods:

Each student makes a circuit of 15 stations comprising of practical tests in different disciplines. 8 minutes/station, 2 minutes for transferring between stations.

Recommended or required reading:

Textbooks and manuscripts of the fifth year.

Assessment methods and criteria:

The examiner on each station assesses the performance of the student.

Grading:

Passed/failed

Person responsible:

Professor Matti Uhari

Other information:

Each student has to be participated in every course of the fifth year.

080401A: Obstetrics and gynecology, 10 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Juha Tapanainen

Opintokohteen kielet: Finnish

ECTS Credits:

11 op

Language of instruction:

Lectures will be given in Finnish. In case exchange students are participating in group instruction, the language of instruction will be English.

Timing:

5th study year C 9-10

Spring semester, weeks 7 – 18

Fall semester, weeks 33 – 42

Learning outcomes:

After completing the course *Obstetrics and Gynecology* the student will have sufficient theoretical and practical knowledge in obstetrics and the most common gynecological illnesses, as well as the diagnostics, treatments and prevention thereof. Furthermore, the student will learn about a normal pregnancy, childbirth and puerperium. The course will provide the student skills required to work in a public health center as a general practitioner and to handle the treatment of acute cases.

Contents:

Main Contents of Obstetrics and Gynecology in Basic Studies

Introduction: patient's anamnesis and examination, diagnosis and treatment plan, ultrasonography and other medical procedures, sexology, and violence against women.

Obstetrics: physiology of a pregnancy, planning and monitoring of pregnancy, monitoring of childbirth, puerperium, birth control, sterilization, and termination of pregnancy.

Pregnancy complications: miscarriage and gynecological hemorrhage, pre-eclampsia or eclampsia, multiple pregnancy, fetal growth retardation, premature delivery and preterm loss of amniotic fluid, infections during pregnancy, 3rd trimester hemorrhaging and ablation, postpartum hemorrhaging, diabetes and pregnancy.

Gynecology: menstrual cycle, leucorrhea and abnormal menstrual bleeding, sexually transmitted diseases and infections, gynecological endocrinology and infertility.

Gynecological abnormalities: pelvic inflammatory disease (PID), uterine prolapse and incontinence, endometriosis, abnormal gynecological bleeding, infertility, tumors, hormonal replacement therapy and osteoporosis.

Optional courses: fetal diagnostics and genetic testing, characteristics of gynecological geriatrics, *Ethical problems* seminar, medicine in developing countries, global health, interaction.

Learning activities and teaching methods:

An online exam (www.oulugyn.net) must be completed prior to taking this course.

Group instruction will be provided at policlinics, where 1-2 students at a time participate in running the practice of a specialist doctor or an intern. The students will be able to interview and examine patients under supervision. The group will spend a week in the maternity room, during which time each student will participate in a minimum of 5 deliveries. Furthermore, students will examine patients on the day prior to their scheduled surgeries and participate in these operations. There will be two ultrasonogram demonstrations for each student. All specialist doctors and interns at the clinic have been recruited for instruction.

Instruction at public health centers and maternity-child health centers will be conducted in small groups of 2-3 students in the following health centers: Kempele Health Center (gynecological patients), and Tuira and Haukipudas Maternity-Child Health Center (maternity care). One student at a time will interview and examine a patient and perform necessary procedures (ultrasonogram, PAP smear and Pipelle sample, fluid loading, inserting an IUD). The student will make a suggested diagnosis, as well as suggest possible further examinations and treatment, which are later discussed in the group. The patient will also participate in the counsel regarding herself.

Prior to the in-group work the students will participate in **Fantom instruction** (1,5 hrs), which will prepare the students for patient examinations.

Lectures 31 hrs.

Morning meetings. Wednesday mornings at 8.15 – 9.00. Students may wish to participate in the scientific meetings of the clinic.

Problem-Based-Learning (PBL): (10 sessions, 2 hrs each, and literature research, total of 30 hrs.)

Students will work on actual patients' cases, set learning goals for themselves and learn by using professional literature and information from the internet.

Group instruction: 9 times, 2 hrs each, total of 18 hrs.

- Kempele Health Center, Höyhtyä and Haukipudas Maternity-Child Health Centers, 3 hrs each, total of 9 hrs.

- Maternity and Gynecology Policlinics and Wards, included in group instruction.

- Maternity Room instruction, included in group instruction.
- Examining patients scheduled for surgery and participating in the operation, included in group instruction.
- Ultrasonogram demonstration / examination ward, included in group instruction .

Hospital On-Call

Students will participate in on-call duties with the on-call Ob Gyn doctor at the Oulu University Hospital, total of 6 hrs.

Theme Days

Acute abdomen: carried out in co-operation with the Clinic for Surgery and Radiology, total of 3 hrs. Students will be introduced to the main illnesses leading to an acute situation, as well as examining and treating them.

Pediatrics' Theme Day: toxication, narcotics and alcohol, 4 hrs.

Students will learn about the effects of substance abuse on the mother and fetus / child.

Sexology: carried out in co-operation with the Dermatology Clinic, total of 4 hrs.

Students will be divided into 6 groups; each group will prepare a 10 minute PowerPoint presentation on a given subject (sexually transmitted diseases). The group will also prepare commentary statements about two of the other groups' presentations. Students will also participate in 2 hrs of lectures on sexology.

Minisymposium Gynecological cancer, 4 hrs.

Course Congress

Students are divided into 6 groups. Each group will prepare a poster and a 10 minute PowerPoint presentation on a given subject. The presentation will be given by one member of the group. Furthermore, the group will prepare commentary statements about two of the other groups' presentations.

Instruction at a Central Hospital

Working at a central hospital will give students good insight on the praxis of our specialty outside the university hospital. It will also help students in learning practical skills and procedures. Each student will work at a central hospital under the supervision of local chief physicians for one week. At the hospital students will gain experience in the practices of the specialty as well as gradation of care.

Recommended optional programme components:

Theme Days are carried out in co-operation with other clinics.

Recommended or required reading:

Primary :

Ylikorkala O, Kauppila A. Naistentaudit ja synnytykset. Kustannus Oy Duodecim, 2001. (New edition in the fall 2004)

Alternative, for foreigners :

Callahan T, Caughey A, Heffner L. Blueprints in Obstetrics & Gynecology, ISBN 0-86542-505, 1998 Blackwell Science, USA

Campbell S, Monga A, Gynaecology by Ten Teachers, ISBN 0 340 74081 7, 2000, Oxford University Press, New York, USA, <http://www.arnoldpublishers.com>

Campbell S, Lees C. Obstetrics by Ten Teachers, ISBN 0 340 74082 5, 2000, Oxford University Press, New York, USA, <http://www.arnoldpublishers.com>

Lambrou N, Morse A, Wallach E. The Johns Hopkins Manual of Gynecology and Obstetrics, ISBN 0-7817-1890-2, Lippincott Williams & Wilkins, USA

Complementary:

Martin L Pernoll. Current obstetric and gynaecologic diagnosis and treatment. Prentice-Hall Internat. Inc. (latest edition).

E Malcolm Symonds. Essential obstetrics and gynaecology. Churchill Livingstone (latest edition).

Assessment methods and criteria:

Participating in lectures is voluntary; however, other instruction is mandatory. To complete the course, the student must submit a logbook, showing the his/her attendance in mandatory instruction. All examinations (pre-course exam, weekly exam, multiple choice and patient case exams) must be passed. The student also must return the mandatory feedback form.

Grading:

The final grade consists of a two part final exam (multiple choice and patient case), an exam as well as active participation in PBL-teaching. The maximum is 100 points. Grading: 0 = fail, 1-5 = pass. A passed grade consists of approved attendance and a minimum of 50 points in exams. The Objective Structured Clinical Examination (OSCE) exam will not be included in the final grade.

Person responsible:

Professor Markku Ryyänen

Other information:

A prerequisite for participation is completing all previous study units.

080410A: Occupational health, 2 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Leena Ala-Mursula

Opintokohteen kielet: Finnish

ECTS Credits:

1,5

Timing:

C11

Learning outcomes:

The student knows service system in occupational health and the role of occupational health services. The student understands the basic facts about the relationship between work and health and is able to recognize work related diseases and occupational diseases.

Contents:

- Elementary knowledge in occupational health care
- Assessment of the relationship between work and health
- Basis of work related diseases and occupational diseases

Learning activities and teaching methods:

Lectures, group works and seminars

Recommended or required reading:

Antti-Poika M: Työperäiset sairaudet [Work related diseases]. Työterveyslaitos, Helsinki.

Hand-outs of the course

Assessment methods and criteria:

Participation in group works and seminars and written examination

Grading:

The evaluation scale: pass/fail

Person responsible:

Professor Hannu Virokangas

Other information:

In the Institute of Health Sciences the course is included in the learning branch of

- prevention of diseases and health promotion and
- examination of patient and health strategies

080204A: Oncology, 4 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Turpeenniemi-Hujanen, Taina Marjatta, Karihtala, Peeter Johannes

Opintokohteen kielet: Finnish

ECTS Credits:

4.0 op

Timing:

C 11

Learning outcomes:

After the course the student should have comprehensive knowledge of etiology, diagnosis, prognosis, treatment, rehabilitation and follow-up of different cancers. They should also understand the role of different levels of health care system during this process.

Contents:

Lectures covering clinical oncology and radiation therapy, different cancer treatment modalities and their application in different malignant diseases and during palliative and terminal phases of these diseases. Special cancer types will be covered during lectures according to separate lecture schedule. Treatment of cancer associated pain is taught in pain symposium organized by the department of anaesthesiology. Teaching of cancer epidemiology and screening is integrated into the curriculum of global health and teaching of prostate and breast cancer are integrated into surgical curriculum.

Learning activities and teaching methods:

Lectures 30 t, group teaching 24 t, including 6 t on ward teaching, 6 t on out-patient unit, seminars 10 t and demonstration of radiotherapy planning 2 t.

During instructed outpatient working the student will familiarize with examination, treatment, rehabilitation and follow-up of cancer patients. The aim is to train students into independent work among cancer care. During seminar working the student will familiarize themselves with clinically relevant topics (palliative care, oncological acutology, problem solving and discussing with patients) through problem based learning.

Recommended or required reading:

Joensuu, Roberts, Teppo, Tenhunen: Syöpätaudit, 2007, Kustannus Oy Duodecim; UICC: TNM-luokituskirja ja UICC Clinical Oncology, viim.painos. Suositeltavaa kirjallisuutta: Joensuu H, Kouri M, Ojala A, Tenhunen M, Teppo L: Kliininen sädehoito. Duodecim viim.painos. Vainio A, Hietanen P: Palliatiivinen hoito. Duodecim viim.painos. Lahtinen T, Holsti LR: Kliininen säteilybiologia. Duodecim viim.painos. MacDonald IS: Palliative Medicine. Oxford Univ Press 1998. Bomford CK & Kunkler IH: Walter and Miller's Textbook of Radiotherapy. Radiation Physics, Therapy and Oncology. Churchill Livingstone 2003. Elonen E, Järviluoma E: Solunsalpaajaopas. Duodecim viim.painos. Kallanranta T, Rissanen P, Vilkkumaa I: Kuntoutus. Duodecim viim.painos. Hänninen: Saattohoito. Duodecim viim.painos.

Assessment methods and criteria:

Final exam may be performed in Finnish, Swedish, English or German. Before entering final exam the student must have passed the entrance exam. Before the whole course can be accepted the student must have had an accepted final exam and performed all the group teachings. Suoritukseen vähintään 50% maksimipistemäärästä. Loppuentti järjestetään 4 kertaa lukuvuodessa.

Grading:

0-5

Person responsible:

Professor Taina Turpeenniemi-Hujanen

080303A: Ophthalmology, 4 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**Language of instruction:**

Lectures are in Finnish and group sessions in English

Timing:

C8

Learning outcomes:

The course of ophthalmology is based on learning basic ophthalmology and skills needed for the work of general practitioner. After this course the student should have basic knowledge of symptoms, diagnostics and treatment options of ophthalmic diseases and of connection between systemic diseases and ophthalmic problems. After completion of the course the student should be able to perform visual and ophthalmic examination needed for health check-up, screening of child's visual acuity, to treat general ophthalmic diseases and to assess the need and urgency for further care.

Contents:

Examination of eyes and visual acuity and treatment of ophthalmic diseases based on learning skills needed for the work of general practitioner

Learning activities and teaching methods:

Lectures 38 h, group sessions 10 h, exams 2h + 4 h

Recommended or required reading:

Books: Saari KM (toim): Silmätautioppi. Kandidaattikustannus Oy 2001 or Tarkkanen A (ed): Principles of Ophthalmology. Recallmed 1995.

Assessment methods and criteria:

The completion of the course includes participation in all group sessions and passed exams.

Grading:

Preliminary examination: pass/fail; final examination 0-5.

Person responsible:

Clinical lecturer Johanna Liinamaa

Other information:

Two optional group sessions are provided (cataract surgery demonstration and minor eyelid surgery demonstration).

040417S: Oral and dental diseases, 0,5 op**Opiskelumuoto:** Advanced Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

0.5 credits

Timing:

C7

Learning outcomes:

The student gains the skills and knowledge he or she needs to work as an independent general practitioner

Contents:

Etiology, pathogenesis, epidemiology, diagnostics and treatment of oral and dental diseases

Learning activities and teaching methods:

Lectures 5 h, seminar on oral and dental diseases 4 h

Recommended or required reading:

Overheads

Assessment methods and criteria:

Lectures and seminar

Grading:

Passed / failed

Person responsible:

Professor Martti Sorri (martti.sorri@oulu.fi)

080211A-02: Organ pathology, 2,5 op

Voimassaolo: 01.08.2005 - 31.07.2010

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

2,5 credits

Timing:

C9-10

Learning outcomes:

Upon completion the student should know, for each organ system included, the basic mechanisms of diseases (etiology and pathogenesis), their basic morphological, functional and clinical characteristics, and terminology related with diseases. The student should be able to recognize and classify the most common diseases of the organ systems, understand the relationship between these features of the diseases and their symptoms and other clinical manifestations. The student should know the most important sources of error in histopathological diagnostics, and be familiar with the collaboration between clinician and pathologists needed in every day clinical work.

Contents:

Gynecopathology. Dermatopathology

Learning activities and teaching methods:

Lectures 45 hours; theme days 14 hours practicals 39 hours. Self study, written examination.

Target group:

Medical students.

Recommended optional programme components:

040108A General pathology; 080211A-01 Organ Pathology I

Recommended or required reading:

Books: Underwood JCE: General and systematic pathology, 4th ed. (2004; sections: Basic pathology; General disease mechanisms); or Kumar V. et al.: Robbins Basic Pathology, 8th ed. (2007, or 7th ed. 2003). Alternatives: Kumar et al.: Robbins and Cotran, Pathologic basis of disease, 7th ed. (2005); Rubin & Strayer; Rubin's Pathology (2005). In Finnish: lecture handouts; Guidebook for microscopy practicals; Guidebook for autopsy practicals. Web-based material (in Finnish): http://www.medicine.oulu.fi/pato/opetus/YP_ATK_JOHDANTO.htm

Assessment methods and criteria:

The course requirements include participation in compulsory practicals and passing in the mid-term and end-of-course examinations.

Grading:

The evaluation scale is 1-5/fail. Final grade for Organ pathology is based on the grades of Organ pathology 1 and 2, weighted according to proportions of credit points.

Person responsible:

Professor Ari Ristimäki

080211A-01: Organ pathology I, 9,5 op**Voimassaolo:** 01.08.2005 - 31.07.2010**Opiskelumuoto:** Intermediate Studies**Laji:** Partial credit**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

9,5 credits

Timing:

3rd year (autumn)

Learning outcomes:

Upon completion the student should know, for each organ system included, the basic mechanisms of diseases (etiology and pathogenesis), their basic morphological, functional and clinical characteristics, and terminology related with diseases. The student should be able to recognize and classify the most common diseases of the organ systems, understand the relationship between these features of the diseases and their symptoms and other clinical manifestations. The student should know the most important sources of error in histopathological diagnostics, and be familiar with the collaboration between clinician and pathologists needed in every day clinical work.

Contents:

Methods in pathology. Sources of error in histopathological and cytological diagnostics. Molecular pathology of cancer. Pathology of systemic diseases. Pathology of the following organs and organ systems: cardiovascular system, breast, oral cavity, salivary glands, gastrointestinal tract, liver, biliary tract, pancreas, respiratory tract, bone marrow, blood, spleen, lymph nodes, kidneys and urinary tract, male genital tract, bone, articular tissue, soft tissues, muscle, ear, eye and the nervous system.

Learning activities and teaching methods:

Lectures 45 hours; theme days 14 hours, practicals 39 hours. Self study. Two written examinations

Target group:

Medical students.

Recommended optional programme components:

04108A General pathology

Recommended or required reading:

Books: Underwood JCE: General and systematic pathology, 4th ed. (2004); or Kumar V. et al.: Robbins Basic Pathology, 8th ed. (2007, or 7th ed. 2003). Alternatives: Kumar et al.: Robbins and Cotran, Pathologic basis of disease, 7th ed. (2005); Rubin & Strayer; Rubin's Pathology (2005). In Finnish: lecture handouts; Guidebook for microscopy practicals; Guidebook for autopsy practicals.

Assessment methods and criteria:

The course requirements include participation in the compulsory practicals and passing in the mid-term and end-of-course examinations.

Grading:

The evaluation scale is 1-5/fail. Final grade for organ pathology is based on the grades of Organ pathology 1 and 2, weighted according to proportions of credit points.

Person responsible:

Professor Ari Ristimäki

080302A: Oto-rhino-laryngology, 6 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

6.0 credits

Timing:

C7-8

Learning outcomes:

The student gains the skills and knowledge in Otorhinolaryngology he or she needs to work as an independent general practitioner

Contents:

The course deals with diseases of the ear, the nose and the paranasal sinuses, the mouth, the throat, the salivary glands and the larynx as well as injuries of the face. The epidemiology, diagnostics, treatment also rehabilitation are handled. The student also gets acquainted with hearing rehabilitation. An introduction into phoniatics is provided. The group instructions focus on diagnostics and treatment of ear, nose and throat diseases in practice and well as techniques of ambulatory operations. One seminar on vertigo is given in collaboration with several other specialties.

The lectures are given in Finnish but the material provided for the students is translated into English.

Learning activities and teaching methods:

52 h of lectures, out of these 8 h propedeutical lectures at the beginning of the course. The lectures focus on themes, and also on problem based reviews. 28 h of group instructions per student. The students are divided into 12 groups, 2 of these work at the department in each occasion. On an average, a student works for 2 h per week at the department. The group instructions include patient work at the outpatient department; 4 occasions deal with the most common ear, nose and throat diseases, and in addition one occasion (2 h) on phoniatics.

Recommended or required reading:

Textbook: Korva-, nenä- ja kurkkutautioppi ja Foniatrian perusteet. Korvatieto Oy (the most recent edition)
Becker, Naumann, Pfalz: Ear, Nose and Throat Diseases, Thieme 1994
Boenninghaus, Lenarz: Hals-Nasen-Ohrenheilkunde, Springer-Verlag 2005

Assessment methods and criteria:

All group instructions, entering examination and final examination

Grading:

The entering examination is based on the material of the propedeutical lectures. The entering examination deals with anatomy, physiology examination techniques. The final examination consists of a written and an oral part (which also serves as feed back for the written part). 6 questions in the written examination, each giving 0 to 6 points. The result of the entering examination has a weight of 1/7 in the final evaluation. The final evaluation is scored from 0 to 5

Person responsible:

Professor Martti Sorri (martti.sorri@oulu.fi)

040438S: Otorhinolaryngology: Audiology, 1 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Sorri, Martti

Opintokohteen kielet: Finnish

ECTS Credits:

1 credit

Timing:

C7

Learning outcomes:

The student gets acquainted with the hearing organ and the balance system. He gets knowledge on hearing impairments, their diagnostics, treatment and (re)habilitation.

Contents:

See aims

Learning activities and teaching methods:

Lectures (14 h), literature and study visit to the Hearing Centre of the Oulu University Hospital

Recommended or required reading:

Overheads of the lectures, relevant books as agreed with the student

Assessment methods and criteria:

Lectures, final examination

Grading:

Final examination scored from 0 to 5

Other information:

The lectures are given at the Linnanmaa campus together with the students of logopedics. The lectures are given in Finnish but the overheads are provided in English

080502A: Pediatrics, 14 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Mikko Hallman

Opintokohteen kielet: Finnish

ECTS Credits:

13.5 op

Language of instruction:

Finnish

Timing:

C 9-10

Learning outcomes:

Upon completion the student should be able

- to diagnose and treat the most common pediatric diseases as a general practitioner or as a first-year resident in a hospital
- to provide first aid to acutely and critically ill children
- to understand pediatric preventive health care and health education

Contents:

Growth and development; medical history and clinical examination of a child; allergology; endocrinology; diabetology, gastroenterology, hematology, infectious diseases; cardiology, pediatric surgery; pediatric neurology, nephrology, neonatology; oncology; emergency medicine

Learning activities and teaching methods:

1. Ward rounds and small group learning at wards, in four small group sessions problem-based learning is promoted by using a peer consultation method, topics of other small group sessions include the treatment of juvenile diabetes mellitus, the interpretation of complete blood count, treatment and handling of a newborn, heart auscultation, examination of a child with juvenile rheumatoid arthritis.
2. The lectures cover the essentials of pediatrics. Interactive audience response system is used in the lectures in order to activate students and receive feedback. Printed handout version of lecture slides in Finnish is available for students before the course.
3. Outpatient clinic learning includes the examination and treatment of children in the referral clinic under supervision of a clinical teacher.
4. Topics of special theme days include poisonings in children, drug and alcohol abuse, violence and sexual abuse.
5. Every student attends the pediatric emergency room for 2-3 evenings and examines patients under supervision of doctor on-call.
6. Student visits to the School of Lohipato, a special school for children with neurological illnesses and to Tahkokangas Service Center for mentally retarded people are arranged.
7. There are four seminars on different topics during the course.
8. Staff meetings on interesting patient cases are open for students.
9. Four examinations (please see assessment methods)

Recommended or required reading:

Book: Rudolph A., Kamei R. & Overby K. (edit.) Rudolph's Fundamentals of Pediatrics. Third Edition. McGraw-Hill Companies, 2002.

Or: Lissaurer T. & Clauden G. Illustrated textbook of paediatrics. Mosby. London, Last Edition.

Printed version of lectures.

Materials can be freely used also during examinations.

Assessment methods and criteria:

Preliminary test (multiple choice questions), Book by Raivio et al.

Patient examinations: a) 10 patient cases as slides and medical history; 0-20 points (approved >5 p.)

b) Objective structured clinical examination (OSCE) for all courses of the 5th year in medical school in the spring semester.

Final examination: 10 patient scenarios, 0-6 points/patient (max. 60 points, approved >35 points).

Grading:

Scale 0-5.

Final examination (75 %) ja patient examination (i.e. slide show) (25 %) max. 80 points

Person responsible:

Professor Matti Uhari (matti.uhari@oulu.fi)

040106A: Pharmacology and toxicology, 10 op

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

10.0 p

Language of instruction:

Finnish

Timing:

C4 / DC4

Learning outcomes:

The student will learn fundamentals of pharmacology and toxicology. After passing the course the student should know how the *body* affects a specific drug after administration and physiologic effects of drugs and their mechanisms of action. The student should get familiar with major drug classes and their role in the treatment of disease. Furthermore, the student understands the basis of individualized drug therapy. After passing the course, the student should have ability to safe and efficient drug therapy.

Contents:

The basic terminology of pharmacology: pharmacodynamics and pharmacokinetics. Systematic review of major classes of drugs: drugs affecting cardiovascular system, gastrointestinal drugs, drugs affecting the respiratory tract, drug treatment of pain, drugs used to treat endocrinological disorders, affecting the central nervous system, anesthetic agents, antimicrobial drugs, anticancer drugs. Details of key drugs in each class will be discussed including route of administration, drug effects, drug interactions and most common adverse effects. Toxicology: the basics of toxicology, the most common poisonings, tissue specific toxic responses in most important organs and fundamentals of risk assessment.

Learning activities and teaching methods:

Lectures (77 h) and tutorials (compulsory, 18 h). In tutorials, students discuss with tutor about the topics of lectures. A web-based exam and three written exams.

Recommended or required reading:

Olavi Pelkonen and Heikki Ruskoaho (eds.) Lääketieteellinen farmakologia ja toksikologia (Kustannus Oy Duodecim) (latest edition) or equivalent textbook.

Assessment methods and criteria:

Lectures, tutorials, web-based exam, written examination.

Grading:

The evaluation scale is 5-1/fail

Person responsible:

Professor Heikki Ruskoaho, professor Jukka Hakkola and lecturer Jaana Rysä

Other information:

At the beginning of the course students study independently for a test evaluating the required level of knowledge of pharmacokinetics and pharmacodynamics. In addition, two essay examinations (worth one-third of the final grade) and final exam (worth two-thirds of the final grade) are included.

080703A: Physiatry, 3 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karppinen, Jaro Ilari

Opintokohteen kielet: Finnish**ECTS Credits:**

3 op

Language of instruction:

Finnish

Timing:

Spring term of the 4th year.

Learning outcomes:

"Upon completion the student should be able to:

- know the pathophysiology and diagnostics of common musculoskeletal disorders.
- have a basic knowledge about rehabilitation of selected diseases/disorders
- know how rehabilitation is organized in Finland.
- know the basics and efficacy of physical modalities and physiotherapy.
- treat common musculoskeletal disorders

Learning activities and teaching methods:

Lectures 32 hours, demonstrations 8 hours (includes an injection demonstration using upper extremity injection models)

Recommended or required reading:

The text book of Physical and Rehabilitation Medicine (Finnish), Practice Guidelines in Physiatry (Finnish). Selected Finnish articles.

Assessment methods and criteria:

Lectures are not obligatory, whereas demonstrations must be attended. Before the course the students can participate in a www-examination. Passing the www-examination will give 2 bonus points for the final examination.

Grading:

"The final examination contains 4 questions with a scale from 0-24. The evaluation scale is pass/fail (12 points are needed to pass)."

Person responsible:

Professor Jaro Karppinen

040112A: Physiology, 15 op**Voimassaolo:** 01.08.2005 -**Opiskelumuoto:** Basic Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Vuolteenaho, Olli Jaakko Tuomas**Opintokohteen kielet:** Finnish

Ei opintojaksokuvauksia.

080206A: Prescriptions, 0,5 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Viitala, Pirkko Liisa**Opintokohteen kielet:** Finnish**ECTS Credits:**

1.0 p

Language of instruction:

Finnish

Timing:

C5 / DC5

Learning outcomes:

The student will learn correct prescription skills and will get familiar with the official regulations and restrictions concerning prescription, delivery and reimbursement of the drugs. Additionally the student will get a general view to chemist's role in drug delivery.

Contents:

Structure and content of prescription. Different types and uses of prescription. Regulations of prescription and drug delivery and reimbursement. Cooperation of doctor/dentist, chemist's and Kela (The Social Insurance Institution of Finland) for safe and efficient drug therapy. Introduction to drug registration, licensing, quality control and preservation.

Learning activities and teaching methods:

Lectures 8 h. Prescription writing practice 2 h.

Recommended or required reading:

Book: Ilari Paakkari: Käytännön reseptioppi (Kandidaattikustannus Oy, latest edition). Course material and appropriate lists and regulations in the Pharmaca Fennica.

Assessment methods and criteria:

Written exam. Acceptable performance requires good knowledge on the theory and satisfactory prescription ability.

Grading:

Pass/fail

Person responsible:

Pirkko Viitala (pirkko.viitala@oulu.fi)

080103A: Psychiatry, 12 - 14 op

Voimassaolo: 01.01.2009 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

ECTS credits 14.0

Language of instruction:

Finnish.

Timing:

S7-S8, 4th year, autumn and January

Learning outcomes:

To give basic facts on psychiatric nosology and care, especially in basic health care. Students should be able to identify common mental disorders (axis I and axis II) and to know how to treat them especially among adult patients according to the Treatment Recommendations (psychotherapy, psychopharmacology) in basic and specialist level health care. Students should learn to identify also severe mental disorders in adolescents, adults and elderly and be able to send the patients to the psychiatric emergency and psychiatric care, also involuntary if necessary. The student should also know how to identify patients with psychosis and also at risk for suicide or violent act.

Contents:

Major psychiatric illnesses in adults and adolescents, their first aid and care. Examining a psychiatric patient. Patient-doctor relationship. Nosology, diagnostics and treatment of most common psychiatric diseases. Psychiatric legislation and forensic psychiatry. Psychopharmaceutical treatment. Psychotherapy and its applications. Clinical psychology. Psychosomatics. Adolescent psychiatry. Psychiatry among elderly people. Ante and postnatal mental disorders, Offspring of parents with mental disorders, for example with depression and psychosis. Doctor-patient interaction, team work, management, coping with physician's profession.

Learning activities and teaching methods:

Lectures from various themes in psychiatry (psychiatric epidemiology, schizophrenia and other psychoses, depression, anxiety disorders, substance use disorder, perinatal mental disorders, psychiatry in health care center, adolescent psychiatry etc) . Besides lectures, the education consists mainly of group education, several

seminars and also clinical practice which includes following clinical work in psychiatric units and emergency duty. There are two examinations: one in the intranet in Optima and the final written examination. Question time and feedback. The student has to understand and speak Finnish fluently in order to be able to participate in the course.

Recommended or required reading:

Lönnqvist J, ym (toim.). Psykiatria. Kustannus Oy Duodecim, Helsinki, 2007. Material from lecturers, seminars and group education. Recommended reading also Evidence based treatment (Käypä hoito) -guidelines in psychiatry and adolescent psychiatry (for example www.terveysportti.fi), Legislation, especially Mental Health Act and Decree, Child Welfare Act (www.finlex.fi-ajantasainen-lainsaadanto) and Huttunen MO. Psykyenlääkeopas, Kustannus Oy Duodecim, 2008, Helsinki

Grading:

The evaluation scale for the final examination is 0-5 (and in the intranet Optima: pass/fail). The best grading is 5.

Person responsible:

Senior lecturer Pirjo Mäki, Psychiatry, Institute of Clinical Medicine

080511A-01: Psychiatry I, 7,5 op

Voimassaolo: 01.08.2006 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirkko Riipinen

Opintokohteen kielet: Finnish

080511A-02: Psychiatry II, 6,5 op

Voimassaolo: 01.08.2006 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Lindeman, Sari Maaria

Opintokohteen kielet: Finnish

ECTS Credits:

6.5 ECTS credits

Language of instruction:

Finnish

Timing:

Vth year autumn and spring term

Learning outcomes:

Upon completion the student should be able to:

- identify Axis II diagnoses (personality disorders)
- apply criteria for access to non-emergency treatment
- apply clinical guidelines in treatment of patients with major mental health problems in primary health care
- know key concepts on interpersonal skills and use them in real surgery situations

Contents:

Psychiatric diagnostics and treatment. Communication skills.

Learning activities and teaching methods:

Lectures, groups, seminars, simulations.

Recommended or required reading:

Lönnqvist J et al. (eds): Psykiatria, Duodecim, latest ed. (available only in Finnish)

Assessment methods and criteria:

Examinations, logbooks to monitor the completion of compulsory studies.

Grading:

Psychiatry I and II together: passed 5-1/ failed 0.

Person responsible:

Department of Clinical Medicine, Department of Psychiatry

Other information:

Prerequisite: Psychiatry I

040104A: Psychology, 4 - 4,5 op

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karl-Erik Wahlberg

Opintokohteen kielet: Finnish

ECTS Credits:

4.5 ects

Timing:

C3

Learning outcomes:

A student learns to see a human comprehensively, from biopsychosocial frame of reference, finds new ways to observe and to influence with psychological methods on patients and their behaviour. Furthermore, an objective is, to help future medical and dental doctor to observe their influence on the behaviour of patients and on operations of health caring system. Finally, a goal is to develop interactional skills of future doctors and to prevent their vicarious traumatisations.

Contents:

During lectures the following topics will be presented: Biopsychosocial approach, psychoanalytic personality theory, attachment theory, human lifespan, significance of learning theory in changing man's behaviour, basics of system theory, medical and dental doctor as a participant in the mental health care system, different kind of families and their phases of development, well functioning family, roles of family members. Furthermore vicarious traumatisations and exhaustion and how to manage them will be described. Topics of small groups are for instance problem solving therapy, use of hypnosis, traumatic crises, familial and cultural influence on behaviour of a human, clinical neuropsychology and cognitive functions, youth psychology, parenthood and forensic psychiatry.

Learning activities and teaching methods:

Lectures 28 hrs, obligatory small group participation 12 hrs, obligatory seminar participation 20 hrs, peer group participation 10 hrs and self studying.

Target group:

Medical and dental students

Recommended or required reading:

Contents of the lectures and written and oral presentations of the works of small groups.

Assessment methods and criteria:

End of course examination

Grading:

5-1/fail

Person responsible:

lecturer Karl-Erik Wahlberg

040116Y: Public health and interprofessional collaboration, 5 op

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Taanila, Anja Marjatta

Opintokohteen kielet: Finnish

ECTS Credits:

5,0

Language of instruction:

Finnish

Timing:

C1

Learning outcomes:

The objectives of the study module are that a student gets acquainted with the essential challenges of Finnish public health, action of health and social welfare systems and national strategies guiding them as well as, interprofessional health promotion. In addition, a student understands the importance of communication and well functioning doctor-patient relationship and interprofessional collaboration in the work of doctor and dentist.

Contents:

Public health and sickness and inequality in health, concepts of health and sickness, concepts and means of health promotion, concept of positive health, essential concepts and theories of health sociology, essential features of social and health care systems and their relation to the community, doctor-patient relationship and interprofessional collaboration.

Learning activities and teaching methods:

Lectures, demonstrations, e-learning, practical period in health care center (3 days), small group working, participating in student congress and preparing the presentations for the congress. Part of the teaching is carried out in collaboration with the students from Oulu University of Applied Sciences.

Target group:

The students from medicine and dentistry and the students from Oulu University of Applied Sciences.

Recommended or required reading:

Recommended literature: Isoherranen K. Moniammatillinen yhteistyö. Porvoo Helsinki : WSOY , 2005. Karisto A, Lahelma E, Rahkonen O (toim.), Terveys sosiologia. 1996. Kumpusalo E, Ahto M, Eskola K, Keinänen-Kiukaanniemi S, Kosunen E, Kunnamo I, Lohi J (toim.): Yleislääketiede, Kustannus Oy Duodecim, Karisto Oy Hämeenlinna 2005, ss. 18-66, 105-115 ja 249-407. Larivaara P. Potilas-lääkärisuhde. Kirjassa: Koskenvuo K (toim.). Lääkäriin työ ja laki. Kustannus Oy Duodecim, Helsinki, 2000, s. 78-87. Taipale V, Lehto J, Mäkelä M, Kokko S, Kling T, Viialainen R (toim.): Sosiaali- ja terveydenhuollon perusteet. 4. Painos, WSOY 2001.

Assessment methods and criteria:

Participation in the demonstrations, group works, e-learning, practical period in health care center and in student congress, examination.

Grading:

Accepted/fail

Person responsible:

Professor Anja Taanila

Other information:

Included in the study modules of the Public Health Science and General Practice 1) Prevention of sickness and health promotion, 2) Interprofessional management and administration, 3)

Clinical examination and treatment, 4) Rehabilitation and social care, 5) Researcher's knowledge and skills.

080205A: Pulmonary diseases, 3 op

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Maritta Jaakkola

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS

Language of instruction:

Finnish

Timing:

Year 3, Semesters 5 and 6

Learning outcomes:

After this course the student is able to treat common respiratory diseases. The student has basic knowledge about respiratory diseases, pathophysiology of these diseases and common lung function tests. The student knows how to deal with problems that are not resolved and treated in primary care.

Contents:

Respiratory medicine and clinical cases. Measurements of lung function, performance of common lung function and other diagnostic tests and the assessment of the test results.

Learning activities and teaching methods:

1. Lectures 16 h.
2. Small group classes 4 h. Attendance is compulsory.
3. Practice in outpatient clinic 4 h. Attendance is compulsory.
4. Seminars 11 h. Attendance is compulsory.

Recommended optional programme components:

Student must have completed preclinical studies and propedeutics of internal medicine.

Recommended or required reading:

Kinnula, V.L., Brander, P.E., Tukiainen, P.: Keuhkosairaudet (III uudistettu painos 2005), Kustannus Oy Duodecim.

Assessment methods and criteria:

Attendance at compulsory teaching. Exam of respiratory medicine.

Grading:

Grading scale in exams is 1-5.

26.6-30.0 # 5, 23.2-26.5 # 4, 19.8-23.1 # 3, 16.4-19.7 # 2, 13.0-16.3 # 1.

Exam consists of five short essays. Six points is maximum / essay. Exam is failed if the total points are less than 13 or if one of the essays is worth of 0 points.

Person responsible:

Professor Maritta Jaakkola (maritta.jaakkola@oulu.fi)

080623A: Radiation physics, biology and safety, 1 op

Voimassaolo: - 01.08.2012

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Koivula, Kalle Antero

Opintokohteen kielet: Finnish

ECTS Credits:

1 credits

Timing:

C3

Learning outcomes:

The student knows the interactions of ionizing radiation and the dose response of influence. She or he is familiar with radiation sickness and injuries, with their symptoms and treatment. The student knows the legislation of radiation usage, and how it is possible to be shielded from radiation risks.

Contents:

The physical and biological mechanisms related to radiation damage will be approached during course as well as the dose dependence of radiation damage. The legislative and regulatory framework guiding the use of radiation is discussed, and how the practical work of radiation protection it is possible to implement in the radiation work.

Learning activities and teaching methods:

Lectures 8 h, exam 2 h

Recommended or required reading:

Lectures, literature in Finnish

Assessment methods and criteria:

Exam on the basis of lectures

Grading:

1-5

Other information:

The course is part of the Finnish legal radiation protection education.

080622A-01: Radiology I, 3 op

Voimassaolo: 01.08.2005 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tervonen, Osmo Antti

Opintokohteen kielet: Finnish

ECTS Credits:

3.0

Timing:

S5-S6, 3rd year

Learning outcomes:

Upon completion of the student should be able to understand principles of image interpretation as well as obtain basic image interpretation skills of radiographs. The student should master indications for selected investigations in radiology within general practice's clinical context and understand correct ordering (percipio) and reporting routines.

Contents:

General introduction to radiology (Techniques), nuclear medicine and radiation protection.

Radiology of skeletal system, thorax and viscerae and interventional radiology. Neuroradiology.

Learning activities and teaching methods:

Tutored film interpretations, demonstrations (Hands-on US practice, radiograph filming, ER-work observance), self study, written examinations

Recommended or required reading:

Soimakallio (Editor): Radiologia or Mettler, FA (Editor): Essentials of Radiology or Brant WE (Editor):

Fundamentals of Diagnostic Radiology (voluntary)

Grading:

Completed written exam is a prerequisite to obtain course credits.

Person responsible:

Professor Roberto Blanco, Professor Osmo Tervonen , Department of Radiology

080622A-02: Radiology II, 3 op

Voimassaolo: 01.08.2005 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tervonen, Osmo Antti

Opintokohteen kielet: Finnish

ECTS Credits:

3.0

Timing:

S11, 5rd year

Learning outcomes:

Upon completion of the student should be able to understand principles of image interpretation as well as obtain basic image interpretation skills of radiographs. The student should master indications for selected investigations in radiology within general practice's clinical context and understand correct ordering (percipio) and reporting routines.

Contents:

General introduction to radiology (Techniques), nuclear medicine and radiation protection.

Radiology of skeletal system, thorax and viscerae and interventional radiology. Neuroradiology.

Learning activities and teaching methods:

Tutored film interpretations, demonstrations (Hands-on US practice, radiograph filming, ER-work observance), self study, written examinations

Recommended or required reading:

Soimakallio (Editor): Radiologia or Mettle, FA (Editor): Essentials of Radiology or Brant WE (Editor): Fundamentals of Diagnostic Radiology (voluntary)
Mettler, FA (Editor): Essentials of Radiology

Grading:

Completed written exam is a prerequisite to obtain course credits.

Person responsible:

Professor Roberto Blanco, Professor Osmo Tervonen , Department of Radiology

902006Y: Reading for Academic Purposes, 1,5 op

Voimassaolo: 01.08.1995 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Language Centre

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: English

Leikkaavuudet:

ay902006Y Reading for Academic Purposes (OPEN UNI) 1.5 op

Ei opintojaksokuvauksia.

040415S: Refresh course of resuscitation, 1,5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Alahuhta, Seppo Matias

Opintokohteen kielet: Finnish

ECTS Credits:

1,0 study points

Language of instruction:

Finnish

Timing:

C10 (Fifth year)

Learning outcomes:

Refresh the skills of resuscitation, understand the principles of resuscitation guidelines and able to use these protocols in practice

Contents:

The guidelines for basic life support and advanced life support, theoretical and technical practice

Learning activities and teaching methods:

Resuscitation web course of Duodecim, lectures, practising in small groups, simulation, assistant in C1 (first year) basic life support -course

Recommended or required reading:

The guidelines for basic and advanced life support, Duodecim 2006 and ERC guidelines for resuscitation, Resuscitation 2005

Assessment methods and criteria:

Taking part into the group teaching events and practice as well as C1 basic life support course as assistant

Grading:

The evaluation scale is pass / fail

Person responsible:

Professor Seppo Alahuhta

902007Y: Scientific Communication, 1,5 op

Voimassaolo: 01.08.1995 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Language Centre

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: English

Leikkaavuudet:

ay902007Y Scientific Communication (OPEN UNI) 1.5 op

Ei opintojaksokuvauksia.

901006Y: Second Official Language (Swedish), 3 op

Voimassaolo: 01.08.1995 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Language Centre

Opintokohteen kielet: Swedish

Ei opintojaksokuvauksia.

080712A: Surgery I, 16 - 24 op

Voimassaolo: 01.08.2005 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Juvonen, Tatu Sakari

Opintokohteen kielet: Finnish

ECTS Credits:

18 ECTS-credits

Language of instruction:

Finnish.

Timing:

C 5-6

Learning outcomes:

The students will be made familiar with surgical thinking, working in the first aid clinic, in a surgical operating-room and surgical ward. They will learn: 1) How to speak to and examine a surgical patient, 2) The diagnostics of surgical diseases, 3) The basics of surgical care, and 4) The most usual treatment procedures used in the public health centres.

Contents:

Theoretical part

The propedeutics in General surgery, Gastroenterological surgery, Urology, Orthopedics and Traumatology and in Thoracic and Vascular surgery.

Practical part

Guided and self-made patient examination and planning of treatment strategy, the group teachings in every surgical speciality, the theme teaching days, the surgical wound care, teaching in operating theatres, teaching in the surgical out-patients clinic and the practice in surgical wards.

Learning activities and teaching methods:

Lessons in every surgical speciality, the theme days concerning important surgical topics, the group teachings in surgical wards and polyclinics of specific topics, clinical practices in wound care, teaching in the operating theatres, practice and teaching in surgical out-patients clinics, practice at surgical wards.

The practice at surgical wards (both in University hospital and in some Central hospital of the Northern Finland) includes clinical examination of 6 surgical patients and the practice in operating theatres assisting in 3 operative procedures.

Recommended or required reading:

Roberts, Alhava, Höckerstedt, Kivilaakso: Kirurgia. Kustannus OY Duodecim Helsinki. 1. painos 2004.
 Rokkanen, Slätis, Alho, Ryöppy, Huittinen: Traumatologia. Kandidaattikustannus. Helsinki. 6. painos
 Tunturi, Pätiälä, Rokkanen: Kirurgiset pientoimenpiteet. Tampereen Lääketieteellinen Kandidaattiseura. 4. painos
 Rokkanen, Tervo, Avikainen. Käytännön ortopediaa. 2003.
 Nurmi, Lukkarinen, Ruutu, Taari, Tammela: Urologia. Kustannus OY Duodecim. Helsinki. 2002.

Assessment methods and criteria:

Taking part into the group teaching events, theme days and practices in surgical wards, intermediate examinations I and II, 6 reports of examinations of surgical patients, assisting in 3 surgical operations, serving three evenings at the surgical emergency room clinic and serving two evenings in surgical operative unit for emergency surgery.

Grading:

The final score of surgery is based on final exam. Mid-term exam is accepted if at least 50% of total score is made. Serving as older assistant can raise end marking by 6 points.

Person responsible:

Professor Tatu Juvonen and professor Jyrki Mäkelä

Other information:

Surgery II (C11-12) and optional courses I and II (C11-12)

080712A-04: Surgery II, 6 op

Voimassaolo: 01.08.2005 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Juvonen, Tatu Sakari

Opintokohteen kielet: Finnish

ECTS Credits:

6 study points

Language of instruction:

Finnish.

Timing:

C 11-12 (Sixth year)

Learning outcomes:

The students will be familiar with surgical thinking, the diagnostics of surgical diseases and the ground of surgical treatment and surgical procedures.

Contents:

Pediatric surgery, Thoracic and Vascular surgery, Hand surgery and Plastic surgery.

Learning activities and teaching methods:

Lessons 40h, group teaching events 2h, theme days 3h.

Recommended or required reading:

Roberts, Alhava, Höckerstedt, Kivilaakso: Kirurgia. Kustannus OY Duodecim Helsinki. 1. painos 2004.
 Rokkanen, Slätis, Alho, Ryöppy, Huittinen: Traumatologia. Kandidaattikustannus. Helsinki. 6. painos
 Tunturi, Pätiälä, Rokkanen: Kirurgiset pientoimenpiteet. Tampereen Lääketieteellinen Kandidaattiseura. 4. painos
 Rokkanen, Tervo, Avikainen. Käytännön ortopediaa. 2003.
 Nurmi, Lukkarinen, Ruutu, Taari, Tammela: Urologia. Kustannus OY Duodecim. Helsinki. 2002.

Grading:

The end examination of surgery gives the end marking (0-5). The intermediate examinations I and II (0-5) can raise the end marking. Serving as older assistant can raise end marking by 6 points.

Person responsible:

Professor Tatu Juvonen and professor Jyrki Mäkelä

080723A: Surgical operations-optional course, 1 op

Voimassaolo: 01.08.2008 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

One study point

Language of instruction:

Finnish

Timing:

C 11-12 (Sixth year)

Learning outcomes:

The student will be familiar with small surgical procedures, suturing and handling of the tissues.

Contents:

Training of surgical skills in the surgical laboratory

Learning activities and teaching methods:

Lessons, teaching in the surgical laboratory.

Assessment methods and criteria:

Personal training.

Grading:

The evaluation scale is pass/fail

Person responsible:

Professor Tatu Juvonen and professor Jyrki Mäkelä

Other information:

10-20 students

080705S: Thesis, 20 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Learning outcomes:

The thesis in the degree Programmes of Medicine and Dentistry is a scientific work which shows the student's ability to scientific thinking and research. The student gets acquainted with scientific research and is able to evaluate research publications, the student is capable of independent and responsible work as part of a scientific community, develops his/her problem solving skills as well as critical and ethical thinking, and increases his/her readiness to scientific communication.

Contents:

Writing a study plan which includes the research plan. Supervised research and writing a thesis or scientific article (student as a first or second writer). Oral presentation of the research.

Learning activities and teaching methods:

Independent research work under the supervision of the teacher. Writing a thesis and oral presentation.

Assessment methods and criteria:

Accepted study and research plan, accepted thesis or scientific article, oral presentation.

Grading:

Pass / fail.