Course syllabus for

Clinical medicine - surgery, 27 credits

Klinisk medicin - inriktning kirurgi, 27 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Please note that the course syllabus is available in the following versions:
Autumn2008 , Spring2009 , Autumn2009 , Spring2010

Course code	LKG029
Course name	Clinical medicine - surgery
Credits	27 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Medicine
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Clinical Sciences, Danderyd Hospital
Participating institutions	• Department of Oncology-Pathology
Decided by	Programnämnden för läkarprogrammet
Decision date	2008-02-15
Revised by	Programnämnden för läkarprogrammet
Last revision	2008-08-28
Course syllabus valid from	Autumn 2008

Objectives

Learning objectives are defined as what is common and important in clinical medicine within the specialities of Surgery, Urology, Orthopaedics, Oncology, Forensic Medicine, Anaesthesiology and intensive care and Imaging. These learning objectives are related to the general objectives of the entire educational program. The objectives regarding knowledge and understanding are set according to the Solo taxonomy S1=simple, S2=complex, S3= related to and S4=expanded. The practical skills objectives are set according to Miller M1=know, M2=know how to do, M3=be able to show and M4=be able to do professionally. The human system in balance The student should be able to: Explain normal breathing, fluid balance, circulation, nutrition and metabolism (S2). The human system out of balance The student should be able to: Explain and analyze: abnormal body function as structure and function in relation to symptoms in common, emergency and life threatening diseases and traumas (S3). Explain and analyze the effect on function and activity of common, emergency and life threatening diseases and traumas (S3). Explain and analyze the cause of disease, the prognosis and investigatory principles in common, emergency and life threatening diseases and traumas. Describe the indications for surgery and non-operative treatment alternatives. Describe treatment effects and the risk of complications in

common, emergence and life threatening diseases and traumas. Explain the chain of care, epidemiology, tumour biology and prevention of cancer (S3). Reflect on principles for palliative treatment and rehabilitation (S4). Describe principles in pharmacological treatment, radiotherapy and blood transfusion and to describe effects, indications, side-effects, risks, interactions and contraindications (S2). Describe principles in the choice of imaging procedures and anaesthetic methods. Describe the external causes of different types of traumas and the underlying pathophysiology (S2). Outline causes of disease and prognosis in less commonly occurring diseases and traumas (S2) The human interacting The student should be able to: Explain and compare the distribution of work between different levels of care, between different professional categories and also understand the importance of co-operation. Account for principles regarding coordinated planning of care. Explain the professional responsibility and authority and obligations regarding organ donation, relevant laws and brain death (S3) Account for the prevalence, health economic effect and principles regarding common diseases and describe principles regarding screening and prevention as well as the importance of life style factors. Skills. Direct contact. The student should be able to: Professionally meet a patient and the relatives, gather a history, perform a physical examination, make a preliminary diagnose and inform as well as in cooperation with the patient plan the treatment (M4). Independently be able to identify, take care of and treat common emergent and life-threatening states (M4). Independently be able to take care of emergency and life-threatening states and organize transportation to another level of care (M4). Show how to choose between different common examinations and simpler treatments, how they are done and how to inform the patient (M3). Describe how to answer questions, explains advices, instructs and give ordinations and how to give sensitive information to patient and their relatives (M3). To identify, interpret and document traumas caused by different types of external violence including assault (M2). Know how to use strategies for prevention as well as for early discovery of diseases (M2). In summary know how to treat less common diseases (M2) Indirect contact. The student should be able to: Evaluate the medical history and interpret the results of examinations, proposing a preliminary diagnose, evaluating differential diagnosis, take a medical decision and identify patients in need of intensive care (M3). Evaluate functional state, appropriate level of care, need of hospital care and need of care and rehabilitation (M3). Know the competence of other specialities and professional groups in common, emergency and life-threatening disease (M2). Independently document relevant clinical information (M4). Critically evaluate clinical problems in relation to evidence based medicine in the form of guidelines and local health care programs (M3). In cooperation. The student should be able to: Show how to handle leadership and professional work in a stressful environment through collaboration with colleagues and other professions in the health care system, how to consult the appropriate medical knowledge, how to work as a member in a health care organisation and in a health care team, how to lead medical treatment in cooperation with others and how to perform common tasks in the work at the ward, outpatient clinic and at the operation theatre. Show how to handle the weaknesses and limitations of medical knowledge as well as the own knowledge base and how to identify and evaluate the risks for the patient, for yourself and for others (M3). Independently apply administrative routines and convey health care information to colleagues and other professional groups (M4). Search for documents in databases and how to administer your own portfolio and log (M3). Know how to write a forensic statement (M2). Attitudes. Knowledge and attitudes. The student should be able to: Explain his/hers own values and attitudes and how these can affect your own behaviour in the contact with patients, relatives and staff. Behaviour and judgement. The student should be able to: Have a critical and scientific attitude towards different types of treatment (M3). Reflect on consequences of both your own and others actions and attitudes in meeting the patient (M3). Develop a reflecting ethical attitude in the contact with patients, relatives, colleagues and other staff including palliative care at the end of life (M3).

Content

Content and structure. The credits of the course is distributed as follows: Digestion I: 3 ECTS Digestion II: 3 ECTS Motion: 3 ECTS KUA: 3 ECTS Urinary functions: 3 ECTS Emergency I: 3 ECTS Emergency II: 3 ECTS Tumours/ the endocrine systems: 3 ECTS Integration and exam: 3 ECTS The course is given in cooperation between the specialities of surgery, urology, orthopedics, anaesthesia and intensive care, oncology, imaging, geriatrics, general practice, internal medicine, forensic medicine,

clinical pharmacology and infectious diseases. The course relates to the basic sciences of molecular biology, anatomy, physiology, pharmacology and pathology. The education is planned in cooperation with what has been taught and what will be learned in the rest of the educational program. Clinical rotations. The core of the course is composed of six rotations based on the functional system of the human body and of trauma, surgery and tumours. The course is limited to what is common, emergency or life-threatening within the different disciplines or specialities. Digestion, 4 weeks, Responsible discipline: Surgery, Contributing discipline: Internal medicine, Imaging, Oncology Movement, 4 weeks, Responsible discipline: Orthopedics, Contributing discipline: Reumatology, Imaging, Hand-Surgery, Internal Medicine Urinary tract functions, 2 weeks, Responsible discipline: Urology, Contributing discipline: Urinary tract diseases, Imaging Solid tumours, 2 weeks, Responsible discipline: Oncology, Contributing discipline: Surgery, Pathology, Imaging Acute conditions I, 2 weeks, Responsible discipline: Surgery, Contributing discipline: Orthopedics, Anesthesiology, Forensic medicine, Imaging Acute conditions II, 2 weeks, Responsible discipline: Anesthesia/Intensive Care Contributing discipline: Surgery, Orthopedics, Urology, Imaging Clinical core. The clinical core of the course includes 42 integrated tasks grouped into functional systems according to a separate description. Planning. The course includes 16 weeks of clinical rotations at the wards of the hospital including educational wards, out-patient clinics, emergency clinic and community based care. Each rotation of 2-4 weeks includes one to two days at a primary health care center. The course also consists of an introductory week, study time and examinations. Digestion. This rotations consists of 4 weeks managed by the surgical department. The rotation integrates the education with the specialities Imaging and functional medicine, Oncology, Gastroenterology and General practise. The clinical core consists of the integrated tasks within this rotation. The specific learning objectives for skills are to be able to do an abdominal examination (M4), recto-proctoscopy (M4), minor surgery in local anesthesia (M4), nasogastric tubing (M2) and assisting at surgery (M4). The student should recognize commonly occurring pathological findings in endoscopy of the gastrointestinal tract and at imaging radiologically (M2). Motion. This rotation consists of 2 weeks managed by the orthopedical department and the education is integrated with the specialities of Imaging and functional medicine, Rheumatology and General practice. In this rotation there is a focus on professional training at the clinical education ward (KUA), or a clinical education reception (KUM) in interprofessional groups of students. Specific learning objectives for skills are to take a history regarding the functions of the musculo skeletal system, make a physical examination, evaluate motion correlated pain, punctuate the knee-joint, reponate and apply plasters for fractures of the wrist, ancle and metacarpale bones (M3), primarily handle fractures in multitrauma (M3) and write certificates regarding work inability. The student should furthermore recognize commonly occurring fractures in x-ray as well as other pathological changes in other forms of imaging (M2). The student should also be able to cooperate in an interprofessional team (M4). Urinary functions. This rotation consists of two weeks in the Department of Urology, integrating the education with the specialities of Oncology, Nephrology, Imaging and functional medicine and General practice. In this rotation the reproductive function of the man is included. Specific learning objectives are to make an examination of the prostate and male genitals (M4), place a urinary catheter (M4) , use a bladder scan and to know how to place a superpubic catheter (M2). Furthermore the student should recognize commonly occurring pathological findings in imaging (M2). Tumours and endocrine systems. The rotation consists of two weeks managed by the departments of Oncology and Surgery and integrates the education with the specialities of Imaging and functional medicine, General practice and basic sciences of Molecular biology and Pathology. The general learning objectives for skills are to take a history and perform an examination of the breast regarding tumour diseases (M4), planning of investigation for malignancies (M3), understand the principles of multimodal cancer treatment including the psychosocial aspects (M2) and to recognize commonly occurring changes in imaging (M2). Emergency I (surgery and trauma). This rotation consists of two weeks managed by the Surgical department and integrating the education with specialities of Anesthesia, Imaging and functional medicine and Orthopedics. The specific learning objectives for skills are to be able to evaluate external causes for trauma, treat trauma according to state of the art principles (M3), excise a skin tumour (M3), treat a wound (M3), perform local anesthesia and digital anesthesia (M3), perform a vascular examination and evaluate circulation including the use of Doppler (M3) and to perform a thoracocenthesis (M2) and evaluate an inguinal protrusion (M3). Furthermore the student should be able to evaluate imaging from computer tomography in trauma. Emergency II (circulation and respiration). This rotation consists of two weeks managed by the dept of Anesthesia and intensive care and integrates the education with the specialities

of Surgery, Orthopedics and Urology as well as basic sciences of clinical pharmacology and physiology. Specific learning objectives for the skills are to identify and manage obstructive airways and insufficient respiration (M4), avoid, identify and treat hypoxia (M4). Prepare and administer drugs for injection and infusion (M4). Prescribe the basic administration of fluid, energy and electrolytes (M4). Do an arterial punction (M4). Manage an intravenous line (M4). Mix and inject drugs (M3). Administer a blood transfusion (M3). Do a lumbar punction (M3). Evaluate and treat pain in an emergency situation (M3). The student should also be able to a preoperative investigation related to the patient situation and planned surgery (M3). The student should also recognize common pathological changes in imaging (M2). Integrated areas of knowledge. Basic sciences. Knowledge of basic sciences is integrated into all the theoretical parts of the education partly through the participation of teachers with competence within the basic sciences of the specific subjects, partly through integrated seminars. Professional development. The professional development is focused on cooperation with other professional categories and is mainly managed at the KUA or KUM. The development of the professional role in relation to other professional categories is parallel to the clinical education. The patient should always be in center in patient interviews, clinical examination and the treatment. Ethical problems and attitudes should be continuously illustrated. Scientific development. The scientific knowledge ralates to the integrated tasks for each rotation. One day during the course is devoted to Evidence based medicine.

Digestion I, 3.0 hp

Grading scale: GU

Digestion II, 3.0 hp

Grading scale: GU

Motion, 3.0 hp

Grading scale: GU

KUA, 3.0 hp

Grading scale: GU

Urinary functions, 3.0 hp

Grading scale: GU

Emergency I, 3.0 hp

Grading scale: GU

Emergency II, 3.0 hp

Grading scale: GU

Tumours-the endocrine systems, 3.0 hp

Grading scale: GU

Integration and exam, 3.0 hp

Grading scale: GU

Teaching methods

The educational part focusing on skills is mainly taking place at the wards and other care units under the supervision of clinicians. The students participate in the daily work of the unit and the education is patient-related, systematic and focused on the students needs. Patients or cases with problems related to the integrated tasks are discussed. At the hospital the education is taking place at wards, OR:s and x-ray departments, at the emergency department, at the clinical education ward or reception and at outpatient clinics. At the Primary Care units the education is taking place partly in groups, partly in tutored practical tests with a personal feed-back from the tutor. The part of the education focusing of knowledge and understanding is primarily related to the integrated tasks but also conveys the specific knowledge base of the included disciplines. The education methods are integrated seminars, group education and lecturing, individual project work as literature studies and field studies. One day is devoted to professional development and one day specifically to scientific development.

Examination

Mandatory. All the seminars, patient demonstrations and all schedule time in clinical rotations, including on call duties, are mandatory. Absence and mandatory task that should be fulfilled are to be completed according to the teachers at the rotation and the course management. This could be student activating tasks and/or extra time for clinical rotation. Rotations. The clinical achievements of the students are judged according to an evaluation form in each rotation by the tutors and the responsible teacher of the rotation in cooperation with the course management. Examination. To be able to participate in the final examination all the rotations should have been passed and the portfolio for learning objectives of the course should be completed. The final examination is divided into three parts and each part must be approved. If one part is not approved this part must be done once more. The three parts are - Written examination - OSCE - Oral examination with a patient or patient case where the student takes a history and makes the relevant physical exams and suggest and discuss the different diagnosis and treatment. The grading are approved or not approved. Limitation of test and rotation. If a clinical rotation has not been approved the student has the right to do this rotation one more time. If the student has not been approved in the examination there is another opportunity before the examination the next semester. The three parts of the final exam can be done separately and the limit of the possible examinations are 6 for each part. The practical exam is only administered once per semester.

Transitional provisions

If the course has ceased to exist or undergone major changes there are at least two examinations, excluding the ordinary examination, related to the previous content during a time period of one year from the time when the change occurred.

Other directives

Course evaluation. In connection to the practical exam the student respond to a data based course inquiry. An English speaking course is given yearly during the autumn semester. Course literature and other educational aids. There is no mandatory literature. The list of recommended literature is on the course web. The examiner has the right to break off a students clinical placement with immediate effect, if the student demonstrates such grave lack of knowledge, skill or attitude towards patients, that the safety of the patient or the confidence in the medical care is jeopardized. If the clinical placement is being broken off, the student has failed the course. In such a case, an individual plan of action will be established. In order to be able to continue the clinical placement, the student is required to perform the activities and tests listed in the plan of action.

Literature and other teaching aids

There is no literature specified for this course. Please contact the department for more information.