Course syllabus for

Disease and illness 1, 13.5 credits

Den sjuka människan 1, 13.5 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 , Autumn2009 , Spring2011

Course code	2LK007
Course name	Disease and illness 1
Credits	13.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Medicine
Level	G2 - First cycle 2
Grading scale	Pass, Fail
Department	Department of Laboratory Medicine
Participating institutions	• Department of Microbiology, Tumor and Cell Biology • Department of Physiology and Pharmacology • Department of Oncology-Pathology
Decided by	Programnämnden för läkarprogrammet
Decision date	2007-03-13
Revised by	Programnämnden för läkarprogrammet
Last revision	2008-06-25
Course syllabus valid from	Autumn 2008

Specific entry requirements

30 credits from semester 1.

Objectives

The learning outcomes of the course, based on the achieved outcomes of the courses The healthy man 1, 2 and 3, are delimited by the basic scientific subjects pathology, microbiology, immunology and pharmacology. The aims relate to the general learning outcomes of the whole Study Programme in Medicine. The knowledge is tiered according to the SOLO taxonomy: S1) simple (e.g. know, identify), S2) compound (e.g. account for, describe), S3) related (e.g. analyse, relate), and S4) extended (e.g. theorise, analyse). The skills are structured according to Miller's pyramid: M1) know, M2) know how to carry out, M3) be able to show, and M4) be able to carry out professionally. Knowledge and

understanding The system of man, in balance The student should be able to explain: the reactions of cells to harmful agents as well as the adaptation of the cell to these agents important microorganisms, that is, the structure, pathogenic mechanisms and classification of virus, bacteria, fungi, worms and protozoons and how the immune system protects the individual against these pathogenic mechanisms (S3). pharmacological basic concepts as well as principles of pharmacological treatment (S3). The system of man, in imbalance The student should: in common and/or important diseases, be able to explain both causes of and pathophysiological processes of diseases at different levels, the relation to morphological changes and the consequences of the diseases as well as also be familiar with relevant nomenclature and also have the equivalent knowledge of some less common diseases (S1-S3). be able to explain the structure and function (S3) of medically important microorganisms. be able to explain the basic mechanisms underlying common, and/or important , diseases, caused by microorganisms (S3). be able to explain the mechanisms behind common immunological diseases (S3). be able to explain the bases of the immune system, specific as well as unspecific defence against infections (S3). be able to explain the principles of prophylaxis against, and treatment of, infectious diseases (S3). be familiar with investigation and diagnostics of common and/or important diseases (S1). be able to account for hygienic principles from a microbiological perspective (S2). be able to present principles of the modes of action, absorption, distribution, metabolism, elimination and interactions of drugs and be able to account for the most common adverse drug reactions (S3). Human in interplay The student should: be familiar with the bases in the organisation of the healthcare (S1). be familiar with laws that govern the handling of the dead body and know how and on what basis a clinical autopsy is carried out (S1). be able to account for the importance of certain environmental factors for the health (S2). Skills Direct contact The student should be able to: present the bases of professional patient treatment (M2). follow basic hygienic principles (M3). take samples for certain common microbiological examinations (M3). Indirect contact The student should be able to: understand pharmacological terminology (S1). account for pathophysiological terminology (S2) be familiar with different sampling techniques and tissue analyses in pathology/cytology (S1) assess risks with infection prevention as well as with drug treatment (M2). carry out simple microbiological examinations (M3). In interplay The student should: be able to both acquire and interpret pharmaceutical information (M3). Attitude Knowledge and attitude The student should: be familiar with basic ethical principles (S1). both be clear about his/her own values and attitudes, and understand how these values and attitudes affect the behaviour in the meeting with patients, teachers and health care staff (S1). Behaviour and assessment skills The student should: show respect of the dead body (M3). have both a critical and a scientific attitude to pharmaceutical information (M2). be able to administrate his/her own learning portfolio (M2).

Content

Parts, themes and clinical contents The contents of the course are coordinated with the previous basic scientific courses and with the following course The sick man 2. The course is based on the basic scientific subjects pathology, microbiology, immunology and pharmacology. The different subjects are, in principle, taught one by one, but they can be coordinated, when it is pedagogically motivated. Part 1: Medical Microbiology and Immunology (Medical Microbiology and Immunology), 4.5 credits. Part 2: General Pathology (General Pathology), 4.5 credits. Part 3: Basic Pharmacology (Basic Pharmacology), 4.5 credits. The respective parts are delimited by the basis of the understanding of clinical medicine. The teaching can involve the clinical diagnostic and the clinical investigating specialities. Fields of joint activities are inflammatory conditions and the use of antibiotics. Part 1: Medical Microbiology and Immunology This part is based on achieved learning outcomes concerning biochemistry, cell biology, and the structure and function of the immune system. This part constitutes a basic course in medical microbiology and immunology. It provides the basic the knowledge of microorganisms and the immune system that is necessary to understand infectious diseases and immunological disorders, as well as to understand prophylaxis against, as well as treatment of, infectious diseases. This part also relates to clinical conditions as, for example, respiratory infections, intestinal infections, urinary infections, CNS infections and sepsis. These infection states are, however, mainly, brought up in the next course, The sick man 2. Part 2: General Pathology This part is based on achieved learning outcomes with respect to anatomy, histology, cell biology, physiology and biochemistry. The part that constitutes a basic course in pathology with some clinical connections, focuses on general cellular pathology and general tumour

pathology, and on circulation at molecular level, cellular level, and tissue level. Thereby, the student's understanding of the origin, process and consequences of diseases is is founded This part relates specifically to specific learning outcomes concerning inflammation, arteriosclerosis and tumours. Part 3: Basic Pharmacology This part is based, partly on achieved learning outcomes concerning cell biology, physiology and biochemistry, partly on knowledge from the two introductory parts. The part that constitutes a basic course in pharmacology with certain clinical connections gives the basis for principles about pharmacological treatment. This part deals with general pharmacology, with principles of the modes of action of drugs, dose-effect relationships, absorption, distribution, metabolism and elimination. In this part, neuropsychopharmacology is also included. This part also gives an insight into drug development. The structure of the course Subject-based parts Each part comprises approximately 3 course weeks and starts with general introductory lectures. The parts are mainly based on lectures, group tuition, integrating seminars and placement. Integrated knowledge fields Professional skills (PD) Professional development is included, to a limited extent, in the parts causes of infection and infection defense and disease mechanisms. Specific learning outcomes for the student are to know the ethical principles regarding the handling of the dead patient, and also be familiar with the legislation. Scientific development Scientific development is included in all parts. Specific learning outcomes for the student is to be able to evaluate new findings concerning infection and disease mechanisms and the relevance of these mechanisms to both diagnosis and treatment and also to be able to review information from the pharmaceutical industry, critically.

Medical microbiology and immunology, 4.5 hp

Grading scale: GU

General pathology, 4.5 hp

Grading scale: GU

Basic pharmacology, 4.5 hp

Grading scale: GU

Teaching methods

The pedagogical working methods are student-activating. The lectures are introductory and general. Integrating seminars which illustrate the main contents of the part, are given on single occasions. The student should prepare the seminars. In the case-based seminars, functional disorders are discussed based on the macro and microscopic picture. The case-based seminars also bring up basic infection mechanisms, immunological diseases and the mechanisms of the development of resistance towards antibiotics. During the laboratory sessions, principles for pharmacological treatment are illustrated. Support for the learning is partly available via PingPong, that is an including discussion forum on Internet. The student may also get support from synopses of the lectures, from materials of the seminars,from models of the laboratory reports, and from the personal files. Support for the learning is partly available via PingPong, that is an including discussion forum on Internet. The student may also get support from synopses of the lectures, from materials of the seminars, from models of the laboratory reports, from the personal files and from the question bank.

Examination

The three parts are examined individually. Failed parts must be re-taken. Each examination comprises two parts, both a written examination, and a learning portfolio, consisting of documentation of completion of the integrating seminars and a written reflection. A Pass grade in the course requires compulsory attendance at seminars, group exercises, laboratory sessions and placement in a health care centre and approved laboratory reports. Absence may be compensated by complementary assignments and a make-up laboratory session, respectively, after discussion with the course administration.

Limitation of examination and practical training sessions The number of examination and practical training sessions follows the local guidelines of Karolinska Institutet, implying that the number of examinations is limited to 6, while parts of the course, as a rule, may be repeated only once.

Transitional provisions

If a course has been closed down or undergone major changes, at least two additional examinations (excluding regular examinations) in the previous contents are provided during a period of a year from the date of the change.

Other directives

Course evaluations are carried out by means of a questionnaire after each part. The examiner may with immediate effect interrupt a student's placement if the student demonstrates such serious deficiencies in knowledge, skills or attitudes that patient safety or patient confidence in healthcare is at risk. If the placement is interrupted, it implies that the student fails in the current part. In such cases, an individual action plan should be set up, where it comes clear which activities and examinations are required, before the student is given the possibility to further placement.

Literature and other teaching aids

Abbas, Abul K.; Lichtman, Andrew H.

Basic immunology : functions and disorders of the immune system

2. ed., updated ed. 2006-2007 : Philadelphia, Pa. : Elsevier/Saunders, 2006 - ix, 324 s.
ISBN:1-4160-2974-5 LIBRIS-ID:10097070
Library search

Murray, Patrick R.; Rosenthal, Kenneth S.0 319233; Pfaller, Michael A.

Medical microbiology

5. ed. : St. Louis : Mosby, cop. 2005 - x, 963 s.
ISBN:0-323-03303-2 LIBRIS-ID:9878822
Library search

Rang, Humphrey P.; Dale, M. Maureen

Rang & Dale's Pharmacology

6. ed. : Edinburgh : Churchill Livingstone, 2007 - xiii, 829 s.
ISBN:978-0-443-06911-6 (pbk.) LIBRIS-ID:10332594
Library search

Rubin's pathology : clinicopathologic foundations of medicine

Rubin, Raphael; Rubin, Emanuel; Strayer, David S.

5. ed. : Philadelphia : Wolters Kluwer Health/ Lippincott Williams & Wilkins, cop. 2008 - xii, 1341 s.
ISBN:0-7817-9516-8 LIBRIS-ID:10371728
Library search

FASS : förteckning över humanläkemedel.n 2003

Stockholm : Läkemedelsindustriföreningen (LIF), 2003 - 1869 s.
ISBN:91-85314-85-4 (inb.) ISSN:1400-6588 (hela verket) LIBRIS-ID:8893233
URL: http://www.fass.nu/forms/ffassw.htm
Library search

Goodman, Louis Sanford; Gilman, Alfred

Goodman & Gilman's the pharmacological basis of therapeutics

Brunton, Laurence L.

11. ed. : New York : McGraw-Hill, cop. 2006 - 2021 s.
ISBN:0-07-142280-3 LIBRIS-ID:9976126
Library search

Kumar, Vinay; Robbins, Stanley L.

Robbins basic pathology

8. ed. : Philadelphia, PA : Saunders/Elsevier, 2007 - xiv, 946 s.
ISBN:978-1--41602973-1 LIBRIS-ID:10458648
Library search

Lippincott's illustrated reviews: Pharmacology

Mycek, Mary Julia

2. rev. ed. : Philadelphia : Lippincott Williams & Wilkins, cop. 2000 - 514 s.
ISBN:0-7817-2413-9 LIBRIS-ID:8307491
Library search

Läkemedelsboken, n 2007

Stockholm : Apoteket AB, 2007 - 1260 s.
ISBN:91-85574-57-0 LIBRIS-ID:10399282
Library search