



**Karolinska  
Institutet**

Course syllabus for

# **Urgent Internal Medicine - practical application of basic science at the medical emergency room, 7.5 credits**

Brådskande Internmedicin - praktisk tillämpning av basal vetenskap på medicinsk akutmottagning, 7.5 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:

Autumn2007 , Autumn2009

Course code	LKG014
Course name	Urgent Internal Medicine - practical application of basic science at the medical emergency room
Credits	7.5 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 Medicine, Solna
Participating institutions	<ul style="list-style-type: none"><li>• Department of Medical Biochemistry and Biophysics</li><li>• Department of Physiology and Pharmacology</li><li>• Department of Molecular Medicine and Surgery</li><li>• Department of Oncology-Pathology</li></ul>
Decided by	Programnämnden för läkarprogrammet
Decision date	2007-05-08
Course syllabus valid from	Autumn 2007

## **Specific entry requirements**

Semester 5 of the Medicine programme, and basic knowledge in clinical medicine equivalent to the completion of the course up to week 15 in semester 6

## **Objectives**

The general aim is that the student should have acquired advanced knowledge and understanding of the

subject Emergency Medicine. The learning outcomes of the course are limited to what is important in clinical practice in the area of activity of Acute Internal Medicine and relate to the general aims of the entire Study Programme in Medicine. The knowledge is tiered according to the SOLO taxonomy and the skills according to Miller's pyramid \*. Skills: Assess and treat acutely ill patients with the conditions that prevail in an emergency department i.e. independently be able to: take a directed medical history and interpret the results (M4), carry out a directed status and interpret the results (M4), choose appropriate diagnostics and interpret results of common examinations (M4), have acquired appropriate diagnostic measures such as venous sampling (M4), arterial blood gas (M4), LP (M3), knee puncture (M2), ECG (M4), esophagus-EKG (M2), initiate treatment despite sometimes scanty information (M4), have learnt treatments used in the emergency clinic, e.g. PVK (M4), oxygen inhalation therapy (M4), CPAP (M2), defibrillation (M4), cardioversion (M4). choose appropriate nursing level for different patients, from full measures in the intensive care ward to clean palliation (M2), briefly summarise a disease progression orally and in writing (M4), cooperate with colleagues and other staff in a smooth and suitable way (M4), give information about diseases to patients and families (M4), have updated his/her knowledge in accordance with the EBM model (M3) Knowledge and understanding: Be able to use diagnostics/differential diagnostics and the acute hearing in an emergency department of the following symptoms/symptom combinations (S4): chest pain, swelling/pain/sores in/on extremity, dyspnea, head-ache, syncope, dizziness, impaired general condition, unconsciousness, head-ache, cramps, paralysis, fever, stiff neck, hypotension Have basic understanding of the physiological and biochemical principles and mechanisms that underly the symptoms that the patient presents in the emergency department (S2), the ethical positions one meets in emergency care (S3), the healthcare system the patient is in at an emergency department, where the patient comes from, why the patient is here right now and to where in the system the patient is going, appropriate nursing level (S2) Approach: demonstrate ability to begin diagnostics and treatment at the same time with scanty information (M3), demonstrate an understanding of people from different countries and cultures, socio-economic status, gender and manner of seeking help (M3), be able to handle ethical problems in an informed way (M3), understand the value of using evidence-based treatment methods (EBM) (M3)

## Content

The course uses the patient material that the student meets for a discussion from different perspectives - simple physiology, pathology, pharmacology, fact search through EBM etc Practical training takes place both in the emergency department and in the Clinical Training Centre Focus is on the physician's working methods, how information about the patient is collected, is compiled, is evaluated and, finally, underlies a decision. The meeting with patients with different ethnic, socio-economic and cultural background is treated. The treatment of different sexes has turned out to be different in many contexts like for instance women with chest pains/heart-disease, and this will be brought up. The course integrates internal medicine and its subspecialties. Teachers in physiology, chemistry, pathology, pharmacology, geriatrics and infectious diseases achieve to vertical and horizontal integration. The whole course has a strong clinical anchoring with a practical and robust focus on what to do with the patient here and now, based on placement in the emergency department and emergency care ward. The student is free to participate in a research oriented seminar within basic physiology/biochemistry of relevance to acute treatment or an EBM-focused cardiovascular seminar.

## Teaching methods

Supervised clinical work in the emergency department and emergency care ward at Karolinska University Hospital, Solna. An individual assignment on information search about a current clinical issue (authentic patient-related question) according to EBM. A group assignment each week in order to prepare case presentation (authentic cases) before the group, with pre-clinical aspects also. The patient cases will be well chosen subjects within emergency medicine e.g. heart failure, diabetes, adverse drug reactions, investigation of elderly patients with impaired general conditions. Weekly own case presentations in groups with pre-clinical connection in the presence of a physiologist/biochemist/pathologist. Plenary lecture parts about 6 h/week. These will be symptom oriented and subject

integrating. Practical exercises in those parts that are in focus in an emergency department. Emergency room practice (with simulated patient). Diagnostic examination and integrating seminars. Integrating assignments in the course: Unconsciousness/coma, Self-inflicted injuries/suicidal risk, Chest pain Heart arrests/sudden death, High blood pressure, Abnormal heart activity Fainting/collapse, Hemorrhagic disorder, Fever, Dyspnea, Swelling/pain in extremity, Oedemas.

## Examination

Examination is done through participation in the compulsory parts and through submission and presentation of individual and group assignments. Practical skills, medical history, status, clinical reasoning, and professional treatment, co-operation ability on patient cases will be examined through discussion and feedback from the clinical supervisor. Theoretical knowledge and the student's ability to use it, integrate and evaluate information will be examined through active participation in case studies. The course starts with an overview where individual and common aims are established, and goal fulfilment is controlled at the end of the course. Compulsory parts are the joint seminars, the case presentations and the emergency room practices. clinical teaching requires at least 75% attendance. Limited number of examinations or 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 placement, 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

The course connects to and advances knowledge within Stage B such as the core of the Study Programme in Medicine. Course evaluation takes place according to the guidelines that have been established by the board of education at Karolinska Institutet.

## Literature and other teaching aids

*Matell, Georg; Reichard, Hansd 1929-1998*

**Matell-Reichards Akutmedicin**

*Fryckstedt, Jessica*

Lund : Studentlitteratur, 2006 - 432 s.

ISBN:91-44-03909-3 (inb.) LIBRIS-ID:10030721

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**Stockholmsgemensamma Akutkompendiet 2007**