



**Karolinska
Institutet**

Course syllabus for

Anesthesia and critical care with limited resources, 1.5 credits

Anestesi och vård av kritiskt sjuka med begränsade resurser, 1.5 hp
This course syllabus is valid from autumn 2024.

Course code	9K9005
Course name	Anesthesia and critical care with limited resources
Credits	1.5 credits
Form of Education	Contract education (credits)
Main field of study	Medicine
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Global Public Health
Decided by	Education Committee GPH
Decision date	2024-04-24
Course syllabus valid from	Autumn 2024

Specific entry requirements

Specialised physician or nurse in anaesthesia and/or intensive care or ST physician in anaesthesia and intensive care with at least 3 years of their education completed.

Objectives

The aim is to provide competence, strategies and tools for performing anesthesia and critical care in humanitarian and disaster context.

At the end of the course, the student should be able to:

Knowledge and understanding

- describe how cultural and contexts influence learning, ethics and medical decisions

Proficiency, ability, judgement and approach

In the humanitarian context, the student should be able to:

- carry out anaesthesia and critical care in a safe way
- manage available equipment and drugs for anaesthesia and critical care
- understand principles and action in mass casualty event

- make clinical decisions about medical priorities in resource limited settings
- discuss and act ethical in relation to patients, relatives and co-workers

Content

The course is based on a context with limited resources, either in low-income countries or in a disaster context. With limited access to drugs and equipment and in deficient health care systems, specific knowledge is necessary to apply medical knowledge into clinical practice. The course highlights such difficulties and provides tools to practise anaesthesia and critical care in a medically safe and ethical way in resource limited contexts.

The course includes 3 days on campus with seminars, workshopshands-on training and interactive discussions. Occasional lectures are also included.

The course focuses on anaesthesia and critical care in humanitarian interventions including following areas:

- Introduction to Global health
- Anaesthesia and critical care
- Coaching, ethical dilemmas and medical priorities

Detailed contents:

Introduction to Global Health and health in disasters:

- The global burden of diseases
- Global surgery and anaesthesia
- Health systems and funding
- Components of a health disaster
- Humanitarian assistance and principles

Anaesthesia and critical care in humanitarian context:

- Anesthetic equipment such as "drawover anesthesia", open circles, oxyconcentrators
- Available drugs in resource limited environments; indications, advantages, risks
- Blood transfusions in resource limited environments; whole blood, testing, autotransfusion, alternatives to blood transfusion
- "Damage controlled Resuscitation" with its included components
- Mass casualty event; organisation, triage
- Stabilisation of vital organ functions (respiratory failure, kidney failure, circulatory failure) without advanced equipment
- Paediatric anaesthesia and critical care in resource limited environments
- Obstetric anaesthesia in resource limited environments

Coaching, decision-making, ethical dilemmas:

- Decisions about treatment limitations and palliative care in resource-limited settings and in different cultural contexts
- Ethical dilemmas and medical priorities
- Coaching in resource-limited settings

Teaching methods

Interactive teaching sessions, discussion seminars, case-based workshops, hands-on training with specific equipment, simulation training for mass casualty event.

Examination

Examination through individual oral case-presentation and participation in the simulation training.

The student receives final grade for the whole course (Pass/Fail). To pass, one must be approved on the examination and be present on mandatory training sessions.

Compulsory participation

The examiner assesses if, and how, absence from compulsory educational elements can be compensated for. Before the student has participated in the compulsory educational elements or compensated the absence in accordance with the examiner's instructions, the final course results will not be reported. Absence from a compulsory educational component may mean that the student cannot compensate for the missed compulsory educational element until the next time the course is given.

Limitation of number of occasions to write the exam

The student has right to be offered alternative examination method if one has not participated or fails on the regular.

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities may not be changed, removed or reduced.

Transitional provisions

Examination will be provided during a time of two years after a possible cancellation of the course.

Examination can take place according to an earlier literature list during a time of one year after the date when a major renewal of the literature list has been made.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Committee for Higher Education.

The course language is English.

Literature and other teaching aids

Mandatory literatur

Essential drugs: Practical guidelines:

Médecins Sans Frontières, 2023

URL: [Länk](#)

A Guidance document for medical teams responding to health emergencies in armed conflicts and other insecure environments

World Health Organization. Geneva, 2021

URL: [Länk](#)

EMACC guidelines/protocols

Emergency Medicine Anesthesia and Critical Care Working group, MSF,

Recommended literature

Health in Humanitarian Emergencies : Principles and Practice for Public Health and Healthcare Practitioners

Townes, David

Cambridge : Cambridge University Press, 2018 - 1 online resource (504 pages)

ISBN:9781107477261 LIBRIS-ID:nxptc9rxl8xz7jq8

URL: [Table of contents / Abstracts](#)

[Library search](#)

Jacobsen

Introduction to Global Health

Jones and Bartlett Learning, 2018

LIBRIS-ID:22540864

Additional material and reference literature will be added during the course