



Faculty of Health, Science and Technology
Nursing Science

Syllabus

Basic intensive care

Course Code:

OMAG11

Course Title:

Basic intensive care

Grundläggande intensivvård

Credits:

15

Degree Level:

Master's level

**Progressive
Specialisation:**

Second cycle, has only first-cycle course/s as entry requirements (A1N)

Major Field of Study:

OMA (Nursing Science)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2025-01-28, and is valid from the Autumn semester 2025 at Karlstad University.

Prerequisites

Nursing licence issued by the National Board of Health and Welfare, a nursing degree of at least 180 ECTS credits (including a degree project of at least 15 ECTS credits) or a Bachelor degree in nursing (including a degree project of at least 15 ECTS credits), plus at least 12 months full-time work experience as a licensed nurse, plus upper secondary level Swedish 3 or Swedish as a second language 3 and English 6 or A, or equivalent

Learning Outcomes

Upon completion of the course, students should be able to:

Knowledge and understanding

1. describe the profession of the specialist nurse in intensive care,
2. identify and apply selected qualitative methods in nursing research, and assess them with regard to trustworthiness,

3. analyse physiological and pathophysiological changes and suggest nursing interventions, medical examinations and treatments in cases of respiratory failure,
4. give an account of pharmacokinetics and pharmacodynamics based on pharmacological treatment in intensive care,
5. explain hemodynamic principles and analyse hemodynamic changes in cases of circulatory failure,
6. explain and analyse monitoring, examinations, and treatments, including pharmacological treatment in cases of circulatory failure,
7. explain renal physiology and analyse causes and signs of acute renal failure, as well as justify examinations and treatments,
8. explain principles of nutritional and fluid therapy, and electrolyte balance,

Competence and skills

9. perform accurate calculations for commonly used medications in intensive care,

Judgement and approach

10. identify and reflect upon research ethical problems and considerations in nursing research, and
11. explain the relationship of different scientific paradigms to research questions and problems, and their significance for the choice of method in nursing research.

Content

The course integrates Nursing (3 ECTS cr) and Medical Science (12 ECTS cr).

The course is offered in a hybrid format with on-campus meetings alternating with distance learning. Instruction is in the form of lectures, field studies, simulations, and study assignments, as well as seminars. Studies are conducted individually and in groups. The course integrates scientific theory and method in relation to the field of intensive care nursing.

The course covers the following:

- The profession of intensive care nursing
- Qualitative methods
- Research ethics
- Scientific theory
- Respiratory physiology
- Respiratory failure
- Sedation
- Invasive and non-invasive ventilation treatment
- Arterial blood gases
- Pharmacokinetics and pharmacodynamics
- Hemodynamics
- Cardiovascular pharmacology
- Medication calculations
- ECG
- Renal physiology
- Acute renal failure
- Fluid and electrolyte balance
- Nutrition

Reading List

See separate document.

Examination

The course is assessed through a take-home exam completed in pairs and presented and discussed in a seminar, individual written exams, and active participation in mandatory course components. Mandatory components in this course include group work with case studies and seminars.

Supplementary examination of the take-home exam is permitted if the result is close to the requirements for a Pass grade (only small revisions required). Additional material must be submitted within six days of notification. Only the additional material asked for by the teacher will be assessed in accordance with the assessment criteria, and if it does not reach the minimum level for a Pass, a grade of Fail will be reported.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff. Required course for the Specialist Nursing programme: Intensive care.