



Faculty of Health, Science and Technology  
Nursing Science

## Syllabus

### The fundamentals of nursing and basic medical science

**Course Code:** OMG121

**Course Title:** The fundamentals of nursing and basic medical science  
*Omvårdnadens grunder och grundläggande medicinsk vetenskap*

**Credits:** 30

**Degree Level:** Undergraduate level

**Progressive Specialisation:** First cycle, has only upper-secondary level entry requirements (G1N)

#### **Major Field of Study:**

OMA (Nursing Science)

#### **Course Approval**

The syllabus was approved by the Faculty of Health, Science and Technology 2025-08-27, and is valid from the Spring semester 2026 at Karlstad University.

#### **Prerequisites**

General admission requirements plus Mathematics 2a/2b/2c, Science 2 and Civics 1b/1a1+1a2 or Mathematics level 2a/level 2b/level 2c, Science level 2 and Civics level 1b/level 1a1+1a2, or equivalent

#### **Learning Outcomes**

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

Knowledge and understanding

1. give an account of the development of the nursing profession as well as fundamental

concepts and theories in nursing care,

- 2. give an account of different perspectives and approaches in relation to nursing care,
- 3. give an account of the nurse's area of responsibility as well as regulations, laws, and governing documents related to health and medical care,
- 4. give an account of scientific concepts, the research process, and principles of research ethics,
- 5. give an account of human basic needs and psychological development,
- 6. give an account of health and ill health from different perspectives and in relation to the global sustainability goals,
- 7. give an account of oral health and its significance for overall health,
- 8. explain and reflect upon the meaning and consequences of men's violence against women and domestic violence,
- 9. explain and reflect upon different perspectives on diversity and equitable care,
- 10. give an account of the anatomical structure of the human body at a basic level and use common medical terms,
- 11. give an account of the basic physiology of the human body from the individual cell to organ systems,
- 12. give an account of microorganisms, disease-causing mechanisms, transmission of infection, and the function of the immune system,
- 13. give an account of basic pathophysiological changes, hypersensitivity, and asthma, and
- 14. give an account of basic concepts related to drug calculation.

#### Competence and skills

- 15. apply hygienic and ergonomic principles,
- 16. apply clinical skills included in the course,
- 17. perform cardiopulmonary resuscitation (CPR) and manage airway obstruction in adults, and
- 18. write academic texts based on a source-critical approach and correct source use and referencing.

#### Judgement and approach

- 19. reflect on an approach based on empathy, patient interaction, and communication within nursing care.

#### **Content**

Instruction is in the form of self-study, lectures, seminars, clinical skills training, group work, workshops, and peer reviews.

The course comprises 12 ECTS cr in Nursing, including 3 ECTS cr of clinical placement (VFU), 3 ECTS cr in Social and Behavioral Sciences, and 15 ECTS cr in Medical Science.

The Nursing Profession and Fundamentals of Nursing Care:

Historical perspective on the nursing profession

Ethical theories and principles

Policy documents for the nursing profession

Confidentiality in health and medical care

Patient safety

Consensus concepts from nursing theoretical perspectives

The nursing process

Person-centered nursing care

The theoretical framework Fundamentals of Care

Biological and social gender from a gender perspective

Sexuality and sexual health

Living conditions of LGBTQI individuals

## Science and the Research Process:

Theory of science and commonly used scientific concepts and evidence-based nursing care  
The different steps of the research process  
Research ethical principles and guidelines in nursing research  
Introduction to database searching  
AI as a tool for assessing source reliability

## Different Perspectives on Health, Human Needs, and Psychological Development:

Global health and public health from individual, societal, and multicultural perspectives  
The impact of climate on health  
Determinants of health  
Salutogenesis  
Health literacy  
Mental illness  
Developmental psychological theories

## Domestic Violence and Men's Violence Against Women:

Expressions and forms of violence, normalisation process and separation process, as well as consequences  
Risk and protective factors associated with violence

## Medical Science:

Anatomical concepts and basic chemical processes  
Structure and function of the cell  
Normal flora, infectious diseases, bacteria, viruses, fungi, and parasites, as well as basic hygiene principles  
Gastrointestinal system and metabolic processes  
Endocrine system  
Reproductive organs  
Nervous system  
The senses  
Musculoskeletal system  
Circulatory system  
Respiratory system  
Kidneys and urinary tract  
Electrolyte, fluid, and acid-base balance  
Cellular stress, cell injury, cell death, healing process, pathogenesis of allergy and asthma  
Immune system, structure and function of vaccines

## Clinical Skills:

Basic hygiene routines, hospital bed, patient's personal hygiene and oral care  
Ergonomics and work techniques as well as transfer knowledge  
Structured assessment of vital functions according to ABCDE  
Medication management and oxygen therapy

## **Reading List**

See separate document.

## **Examination**

Assessment is based on digital written exams, take-home exams completed individually and in groups, an oral exam, seminars, peer review, roleplay, clinical skills assessments, and clinical placement (VFU). Attendance is mandatory for the clinical placement with 32 hours per week at the clinic, for clinical skills sessions, and for reflection seminars. Submissions for assessment must clearly indicate individual contributions.

A student who does not pass the regular examination in the course will be given the opportunity for re-examination on at least two occasions within one year of the original examination. A student who does not pass the clinical placement has the opportunity for reassessment of the VFU component on one occasion. Examinations requiring completion of a clinical placement will be carried out, as far as possible, during the next course session, but no later than within one year.

The examiner may decide that a student who is very close to a passing grade can complete a supplementary assignment to receive a passing grade for a take-home exam completed individually or in groups. Additional examination material must be submitted within six days of notification. The supplementary assignment only is then assessed in accordance with the assessment criteria, and if it is insufficient, a grade of fail (U) will be given.

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 in the Nursing programme. Courses with overlapping content may not be included in the degree.

A student who, in the examiner's judgement, will fail to obtain a Pass grade for the practical placement component on the grounds of grave and unprofessional skills and conduct that may cause injury may be required to immediately discontinue the practical training. The discontinuation means that the examiner has failed the student. A student whose practical placement has been discontinued on the grounds of grave and unprofessional skills and conduct may not retake the practical placement until the examiner has ascertained that the student has the knowledge and skills required to re-take the practical placement. The decision must be submitted in writing and clearly state the grounds for the discontinuation. An individual study plan is then drawn up and approved for the student and specify the student's knowledge gaps and inadequate skills, the support offered to the student by the university, how the knowledge will be tested and when the first test will take place. The student has the right to two clinical placement periods to obtain a Pass grade.

As stipulated in the Higher Education Act Chapter 4, sect. 6, and SFS 2007: 989, a student who suffers from mental disorder, abuses alcohol or drugs, or has been guilty of a serious offence endangering others or valuable property can be expelled until further notice. In such a case, the Rector files a complaint to the Expulsion Board of Higher Education, which investigates the matter and makes a decision. A decision of expulsion shall always entail

that the student must discontinue the education until further notice. The Expulsion Board of Higher Education is responsible for all Swedish higher education institutions.