



Faculty of Health, Science and Technology
Oral Health

Syllabus

Anatomy, physiology, and medical microbiology for dental hygienists

Course Code: OHG006

Course Title: Anatomy, physiology, and medical microbiology for dental hygienists
Anatomi, fysiologi och medicinsk mikrobiologi för tandhygienister

Credits: 15

Degree Level: Undergraduate level

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

Major Field of Study:

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2025-12-03, and is valid from the Autumn semester 2026 at Karlstad University.

Prerequisites

General admission requirements and upper secondary level Mathematics 2a, 2b, or 2c, Civics 1b or Civics 1a1 + 1a2, Natural Science 2 or Physics 1, Chemistry 1, and Biology 1, or upper secondary level Mathematics level 2a, level 2b, or level 2c, Civics level 1b or Civics level 1a1 + 1a2, Natural Science level 2 or Physics level 1, Chemistry level 1, and Biology level 1

Learning Outcomes

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

Knowledge and understanding

- Give an account of the structure and function of the cell and of the different tissues in the

body

- Give an account of the cardiovascular system and the function of liver and kidneys
- Give an account of the anatomy and function of the brain related to pain and pain physiology
- Give an account of embryonic development in the head and neck area and describe the tissues of teeth and periodontium
- Give an account of bone, muscle, nerves, vessels, salivary glands in the head and neck area and the structure and function of the oral cavity
- Explain basic concepts of general microbiology and immunology
- Give an account of infection, transmission, and infection protection,
- Give an account of the structure, metabolism, colonisation, and disease-causing properties of oral microorganisms
- Give an account of infection protection and related ordinances as well as hygiene work in dentistry
- Give an account of basic hygiene routines and the handling of dental equipment and instruments in dentistry

Competence and skills

- Identify and name anatomic structures in the head and neck area using medical terminology (Latin)
- Identify and name the morphology of individual teeth and nomenclature for deciduous and adult teeth
- Identify and name bones, muscles, nerves, vessels, salivary glands in the head and neck area and the structures of the oral cavity

Judgement and approach

- Reflect upon professional ethical principles
- Reflect upon hygiene routines and infection protection in dentistry

Content

The course covers the following:

- General cell and tissue theory
- General physiology
- . The anatomy and physiology of the brain
- Pain and pain physiology
- General and oral microbiology
- Immunology
- Infection and infection protection
- The anatomy of the head and neck and medical terminology
- Embryology and oral tissues
- Dental anatomy
- The structures of the oral cavity and their function
- Ordinances that regulate infection protection and healthcare hygiene

Reading List

See separate document.

Examination

Assessment is based on:

- individual written take-home exams followed up in seminars
- individual written exams

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.