



**Karolinska
Institutet**

Course syllabus for

Children's and Adolescent Dentistry, 22.5 credits

Barn- och ungdomstandvård, 22.5 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:

Autumn2010 , Spring2015 , Autumn2015 , Autumn2018 , Autumn2020 , Autumn2021

Course code	2TL028
Course name	Children's and Adolescent Dentistry
Credits	22.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Odontology
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Dental Medicine
Decided by	Programnämnd 10
Decision date	2010-06-30
Revised by	Programme Committee 10
Last revision	2014-12-17
Course syllabus valid from	Autumn 2015

Specific entry requirements

Students can lack no more than 15 HE credits from the most recent previous semester.

Students who fail a clinical placement (or equivalent) as a result of demonstrating such a serious lack of knowledge, skills or attitude that patient safety or the patients' confidence in medical care is at risk, will only be qualified for a new clinical placement once the individual action plan has been carried out.

Objectives

The course contains five parts:

Part 1

Orthodontics 1, 4.5 HE credits

After the course, the student should

- be able to account for the aetiology of the malocclusions
- be able to understand and describe the craniofacial development pre - and postnatally and the

occlusal development from primary to permanent bite

- be able to understand and describe indications of commonly occurring orthodontic treatments
- in consultation with the teachers be able to diagnose malocclusions and select patients with orthodontic treatment needs
- in consultation with the teachers be able to make a preliminary treatment planning before an orthodontic treatment
- carry out simple interceptive orthodontic treatments in consultation with an ortodontist
- in consultation with teachers be able to carry out retention controls of patients with completed orthodontic treatment

Part 2

Orthodontics 2, 4.5 HE credits

After the course, the students should

- be able to independently supervise the normal occlusal development from primary to permanent bite
- at the proper time diagnose malocclusions and select patients with orthodontic treatment needs
- formulate referrals for orthodontic treatment with adequate information about children and adults with orthodontic treatment needs
- account for the occlusal development and the common treatment procedure for patients with cleft lip and palate fissure
- carry out adequate cariologic and periodontal treatment of patients with fixed brace
- understand and account for differences in treatment with fixed and removable brace
- demonstrate knowledge of how environmental and health risks can be minimized in connection with the handling of thermosetting plastics in clinical work with orthodontic appliances.
- inform patients and parents of indications and contraindications for commonly occurring orthodontic treatments, and about the risks with untreated malocclusions
- account for craniofacial syndromes

Part 3

Pedodontics 1, 6.7 HE credits

After the course, the students should:

- have good knowledge of the psychomotor development and somatic growth of children
- be able to communicate with children and introduce various parts in the dental care in an age-adequate way, on the basis of pedagogical methods
- be able to register caries lesions, diagnose caries disease, investigate and analyse caries causal factors in the primary bite, and in the alternating bite, assess caries risk, prognosis for further caries progression, formulate and evaluate individual prevention programs, carry out filling therapy in primary and permanent teeth and assess the quality of the completed treatment
- be able to account for indications and contraindications of and carry out local anesthesia before surgery caries treatment and surgery
- be able to account for normal development and eruption of primary and permanent teeth and local and general disorders in the mineralisation and eruption of the teeth
- be able to register, diagnose, investigate and treat gingivitis and its causal factors, plaque, supra and subgingival calculus, and assess the general conditions in pre-school children and schoolchildren
- be able to account for indications and performance of extractions of primary and permanent teeth
- be able to diagnose and prognosticate traumatic injuries in the oral cavity of children in pre-shool age
- be able to carry out adequate acute treatment of lesions in teeth and surrounding tissues of pre-school children
- be able to account for how to, in a resource-aware manner, use materials and products in view of the growing individual, the environment and health.

Part 4

Pedodontics 2, 6 HE credits

After the course, the students should :

- be able to carry out a teaching session in dental care for children and adolescents on pre-school or in school
- be able to account for and have certain clinical experience of various forms of sedation of children and youths
- be able to diagnose caries in permanent bite, assess caries risk and prognosis for further caries progression and treat caries lesions in primary and permanent teeth including in stages excavating
- can be diagnosed and investigate gingivitis and periodontitis, and its causal factors, plaque, supra and subgingival analysis and connections with patient's general conditions in adolescents
- can be diagnosed and prognosticate traumatic injuries in teeth and surrounding tissues in schoolchildren and adolescents
- be able to conduct adequate acute treatment and follow-up of injuries on teeth and surrounding tissues on schoolchildren and adolescents
- pulpa amputation according to a partial Cvek
- treat abnormalities in the primary bite
- be able to account for diagnostics and treatment of temporomandibular dysfunction of children and youths
- be able to account for chronic diseases and disabilities and their oral manifestations in children and adolescents and diagnose, prevent and treat oral diseases in these children and youths
- be able to account for multiprofessional cooperation in the treatment of children and youths with oral diseases and chronic diseases or disability

Part 5

Pediatrics 0.8 HE credit

After the course, student should be able to:

- account for how the health care for children is organised, children's right in the society, the child convention and the importance of socio-economic factors for the health of children
- account for the normal physical and mental development of the child and normal feeding
- be familiar with the panorama of diseases affecting children and youths
- account for the symptoms of the most common childhood diseases
- account for chronic diseases and disabilities in children and youths

Content

The course contains five parts:

Orthodontics 1, 4.5 hp The lectures comprise occlusal development in the primary and permanent bite, embryology, pre - and postnatal growth, craniofacial development, classification and aetiology of malocclusions, orthodontic treatment, tissue reactions and iatrogen effects of orthodontic treatment. The demonstrations deal with model analysis, impressioning, profile X-ray analysis, classification and diagnostics of malocclusions in the primary and permanent bite, orthodontic apparatus, and selection of patients with orthodontic treatment needs. The clinical education is focused on growth and occlusal development. Assessment of treatment needs and assessment of a date for an interceptive treatment are the most important aims.

In patient consultations, orthodontic diagnostics and patient selection are trained.

Pre-clinical training is carried out by means of a patient simulator. In order to increase the knowledge of interceptive orthodontics, a patient with interceptive orthodontic treatment needs is followed from registration and treatment planning to a completed treatment. **Orthodontics 2, 4.5 hp** The lectures in orthodontics comprise indications and contraindications of orthodontic treatment, prognosis, treatment needs and aims, soft tissue function and environmental factors, adults orthodontics and cooperation, other specialities and also periodontal risk assessment in orthodontic treatment. The lectures in

orthodontics comprise innate cleft lip and palate defects, syndromes and orthognate surgery. The demonstrations deal with diagnosis and treatment of different malocclusions. Special emphasis is placed on a date for diagnosis and orthodontic consultation. The clinical teaching aims to train assessment of bite development and treatment needs, checks of patients on completion of orthodontics, and hygiene procedures during on-going orthodontic treatment. Theme days are held on interceptive orthodontics and also together with the Pedodontic clinic on the treatment of malocclusions in specific patient groups.

Pedodontics 1, 6.7 hp The normal development of the child and applied child psychology

Prevention of oral diseases in children and youths

Local anesthesia for the growing individual

X-ray technique for children and youths

Odontogenesis and eruption disorders

Caries of children and adolescents

Gingivitis and periodontitis in children and youths

Oral pathologic changes in soft tissues

Endodontics of children and adolescents

Common surgeries in children and youths

Traumatic dental injuries in the primary bite

Selection of therapy with regard to the environment and the health of the growing individual

Pedodontics 2, 6 hp Prevention including a teaching session in dental care

Sedation of children and youths

Caries in children and adolescents, including treatment of teeth with injuries in mineralisation

Periodontal diseases in adolescents

Oral surgeries and dental infections

Traumatic dental injuries in the permanent bite

Interceptive orthodontics, temporomandibular dysfunction in children and youths, and oral-motoric changes

Oral health in children and youths with chronic diseases and disabilities. **Pediatrics, 0.8 hp** Lectures.

Compulsory attendance at lectures. In case of absence, the student should demonstrate that the equivalent knowledge has been acquired through a written presentation.

Teaching methods

Part 1

Orthodontics 1, 4.5 HE credits

Lectures, demonstrations, attendance as observers at dentists during the specialist education and clinical placement. Demonstrations, seminars and clinical shifts are compulsory.

Part 2

Orthodontics 2, 4.5 HE credits

Lectures, demonstrations, seminars, theme days, attendance as observers of dentists during specialist education and clinical placement.

Demonstrations, seminars, theme days and clinical shifts are compulsory.

Part 3

Pedodontics 1, 6.7 HE credits

Lectures, demonstrations, case seminars, theme days, attendance as observers of specialist dentists and clinical placement.

Demonstrations, seminars, theme days and clinical shifts are compulsory.

Part 4

Pedodontics 2, 6 HE credits

Lectures, demonstrations, case seminars, theme days, clinical observation with specialist dentists and clinical placement.

Demonstrations, seminars, theme days, clinical observation and clinical proficiency training is compulsory.

Part 5

Pediatrics 0.8 HE credit

Lectures. Compulsory attendance at lectures.

The course coordinator decides whether, and if so how, absence from compulsory course elements can be made up. Study results cannot be reported until the student has participated in compulsory course elements or compensated for any absence in accordance with instructions from the course coordinator. Absence from a compulsory course element could mean that the student can not retake the element until the next time the course is offered.

Examination

Part 1

Orthodontics 1, 4.5 HE credits

Written examination. For a pass grade, attendance at compulsory parts are also required.

Part 2

Orthodontics 2, 4.5 HE credits

Written examination. For a pass grade, attendance at compulsory parts are also required.

Part 3

Pedodontics 1, 6.7 HE credits

Examination through common written final exam of Pedodontics 1, Pedodontics 2 and Pediatrics, as well as through clinical examination and logbook. For a pass grade, attendance at compulsory parts are also required.

Part 4

Pedodontics 2, 6 HE credits

Examination through common written final exam of Pedodontics 1, Pedodontics 2 and Pediatrics, as well as through clinical examination and logbook. For a pass grade, attendance at compulsory parts are also required.

Part 5

Pediatrics 0.8 HE credit

Examination through common written final exam of Pedodontics 1, Pedodontics 2 and Pediatrics. For a pass grade, attendance at compulsory parts are also required.

Limited number of examinations or practical training sessions

If the student does not pass the examination, the student gets 2 more attempts. After that, the student is recommended to retake the course and is given 3 more examination opportunities. If the student has not passed after 6 trials, he/she has no more admission to the course. (HF chapter 6, section 11 a).

The examiner may, with immediate effect, interrupt a student's clinical placement (or equivalent) if the student demonstrates such serious deficiencies in knowledge, skills or attitude that patient safety or patient confidence in healthcare is at risk. If a clinical placement is interrupted in this way the student is deemed to have failed that element and to have used up one clinical placement opportunity. In such cases, an individual action plan should be set up stating which activities and tests are required before the student is qualified for a new clinical placement on the course.

Transitional provisions

If the course is closed-down or undergoes major changes, examination under a previous reading list and learning outcomes are offered, no more than one academic year (no more than 2 examinations in addition to regular examinations) after the implementation of the revision/close-down.

Other directives

A course evaluation is carried out according to the guidelines established by the Board of education.

Literature and other teaching aids

An introduction to orthodontics

Mitchell, Laura; Littlewood, Simon J.; Nelson-Moon, Zararna L.; Dyer, Fiona

4. ed. : Oxford : Oxford University Press, 2013 - xiii, 311 s.

ISBN:9780199594719 LIBRIS-ID:14000619

[Library search](#)

Andreasen, J.O. (red.)

Traumatic dental injuries : a manual

2. ed. : Oxford : Blackwell Munksgaard, 2003

ISBN:1-4051-1108-9

[Library search](#)

Pediatric dentistry : a clinical approach

Koch, Göran; Poulsen, Sven

Copenhagen : Munksgaard, cop. 2001 - 482 s.

ISBN:87-16-12271-2 LIBRIS-ID:7199844

[Library search](#)