

Opasraportti

FMed - Dentistry (2020 - 2021)

University's new study guide for academic year 2020-2021 is published at <https://opas.peppi oulu.fi>

The study guide includes information on degrees, curriculums, courses and course timetables. Course registrations are still done in Oodi.

If you have questions on information in the study guide, please contact the study field's Academic Affairs Service Team <https://www oulu.fi/forstudents/faculty-study-affairs>

1. EDUCATION IN DENTISTRY

1.1. General description of the Dentistry

The Degree Programme in Dentistry, the Faculty of Medicine at the University of Oulu, is one of the four Dental Schools in Finland giving both under and post-graduate dental education. Our specific mission is to educate scientifically thinking, clinically competent professional dentists, dental specialists and doctors of dental science. The website of the Faculty of Medicine can be found at <http://www oulu.fi/medicine/>

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1.2. Research areas

The Degree Programme in Dentistry is divided into eight subjects. All subjects are headed by full professors who are in charge of the research, theoretical studies and training in respective areas. Research is also carried out in co-ordination with several subjects both within and outside the University of Oulu. For details of research projects see links to Subjects: <https://www oulu.fi/medicine/oral-health>

- Healthcare (Professor Marja-Liisa Laitala)
- Oral Medicine (Professor Tuula Salo)
- Oral Radiology (Associate professor Annina Sipilä)
- Oral Development and Orthodontics (Professor Pertti Pirttiniemi)
- Oral and Maxillofacial Surgery (Professor George Sandor)
- Cariology, Endodontology and Pediatric Dentistry (Professor Marja-Liisa Laitala)

- Periodontology and Geriatric Dentistry (Professor Pekka Ylöstalo)
- Prosthetic Dentistry and Stomatognathic Physiology (Professor Kirsi Sipilä)

2. Information on Degree Programme

2.1. General description

The degree of Licentiate of Dentistry is 330 ECTS credits. An academic year consists of 60 credits. The studies are pre-scheduled and the average time required to complete the degree is five and a half years.

In Finland, [the National Supervisory Authority for Welfare and Health](http://www.valvira.fi/en/licensing/professional_practice_rights) is responsible for awarding legal status to dentists and for overseeing the profession. After having the dental degree, the graduate applicant can apply for restricted legal recognition from the National Supervisory Authority for Welfare and Health. Recognition is the prerequisite for working as a private practitioner and for applying for posts and duties in the field of dentistry in Finland. More information: http://www.valvira.fi/en/licensing/professional_practice_rights

Studies in dentistry consist of preclinical and clinical phases including theoretical studies, practical training in phantom laboratory and clinical work with patients. Students have their first contacts with patients already at the preclinical phase of the curriculum. In order to arrange teaching to cover more comprehensive themes certain subjects from different subjects in Dentistry have been integrated and taught together in so called strands.

The theoretical studies during the first two preclinical years are together with medical curriculum and consist of cell biology; anatomy, physiology, biochemistry and public health. The clinical part of the studies continue mainly at the facilities of the Dentistry for a three year period. Clinical phase comprises theoretical studies in Dentistry and Medicine, practice in phantom laboratory, clinical demonstrations, tutorials and actual clinical practice in the Teaching Clinic, City of Oulu and the Clinic of Dental and Oral Diseases, University Hospital of Oulu. The final half year is mentored practice in a contract Health Center in Finland. The work with the patients gives the students the necessary skills in oral healthcare, clinical diagnostics, treatment planning and treatment procedures.

2.2. Qualification awarded

Licentiate of Dentistry, (Equivalent to D.D.S. degree in Anglo-American countries)

2.3. Educational and professional goals

The education is based on competence areas that include thorough knowledge on general medicine, oral biology, materials, society and management; good diagnostic, practical and interaction skills; ability in acquiring and assessing information as well as humanity. The competences follow four domains that are described by [Association for Dental Education in Europe](#) (ADEE). These have been identified to represent the broad categories of professional activity and concerns that occur in the general practice of dentistry.

- I Professionalism including Ethics, Regulation and Professional Behaviour
- II Safe and effective clinical practice including Evidence-Based Practice, Management and Leadership, Team-working and Communication, Risk Management
- III Patient-Centred Care including Clinical Information Gathering, Diagnosis and Treatment Planning Therapy and Establishing and Maintaining Oral Health

IV Dentistry in Society including Oral Health in Health Care and Prevention and Health Promotion

(Adapted from Field JC, Cowpe JG, Walmsley AD (eds.). The graduating European dentist: a new undergraduate curriculum framework.

Eur J Dent Educ; 2017: 21 (suppl 1), pp. 1 - 35)

2.4. Access to further studies

Specialization

The Programme in Dentistry in the Faculty of Medicine is also responsible for specialist training. The University of Oulu will consider a person's admission to a specialization program only after he/she has been granted a permit to practice dentistry in Finland. Before entering post-graduate training, which takes three years in clinical dentistry, orthodontics, diagnostics and healthcare and minimum five years in oral and maxillofacial surgery, the trainee must have worked two years in general practice. The aim of specialist training is to provide the dentists with advanced, comprehensive theoretical and practical skills which are defined as clinical dentistry, orthodontics, healthcare and oral and maxillofacial surgery. A national examination is arranged and must be passed by each trainee and written thesis has to be accepted.

Doctor in Odontology (Equivalent to Ph.D. degree in Anglo-American countries)

Dental graduates may continue their studies to Doctor in Odontology. This includes preparing a dissertation and completing other doctorate studies. In order to obtain the degree, a doctoral candidate must participate in theoretical research training, the extent of which is 20 ECTS credits. The training includes prescribed courses in general postgraduate training (5 credits) and special training (15 credits) according to the topic. The candidate must also conduct research, write and publish a doctoral dissertation and defend it in a public debate. Generally, the time needed to obtain a doctorate corresponds to 4 years of full-time work. For details of doctoral studies, see links to [UniOGS](#).

2.5. Course structure diagram (with ECTS credits)

Structure of the Degree Programme

The degree programme is divided into six sections:

General studies 19 ECTS

Language studies 6 ECTS

Basic studies 92 ECTS

Subject studies 68,5 ECTS

Advanced studies 74,5 ECTS

Clinical training 40 ECTS + 30 ECTS

The preclinical phase lasts for two years and mostly consists of basic medical and biomedical studies and subject studies. The completion of clinical phase takes three and half years.

091701A	Clinical Training DC5	1					1		
091713A	Endodontics I	2						2	
A540232	Orthodontics I This study module contains: 091794A Diagnostics in Orthodontics (1 Credits) and 091795A Basic Orthodontic Skills (6 Credits)	7						7	
091721A	Oral and Maxillofacial Surgery I	4						4	
091751S	Periodontology II	2						2	
091702A	Clinical Training DC6	7						7	
091703A	Clinical Training DC7	8							8
091506S	Radiation Safety in Dentistry	0.5							
091781S	Healthcare IV	2							
091704A	Clinical Training DC8	9							
091607A	OSCE	0							
091713S	Endodontics II	2							
091705A	Clinical Training DC9	8							
091772S	Orthodontics III This study module contains: 091772S-01 ORTHO-Seminars 1-5 (1.5 credit) and 091772S-02 Pathology in occlusal development and adult orthodontics (0.5 credit)	2							
091782S	Healthcare V This study module contains: 091782S-01 Immediate Supervisor of Oral Health Care (1,5 credits) and 091782S-02 Acting as a Dentist in the Oral Health Care System (1,5 credits)	3							
091706A	Clinical Training DC10	7							

090603S	Advanced Clinical Training DC11	30							
	2. Oral diseases and overall health								
080206A	Prescriptions	0.5							0.5
091791A	Diseases of Oral Mucosa	3							
090173S	Medical Specialities I This study module contains: 090173S-01 Dermatology and Venereology (0.5 Credits) and 090173S-02 Otorhinolaryngology (0.5 Credit)	1							
091714S	Cariology III	2							
091791S	Oral pathology	6							
091756A	Geriatric Dentistry	3							
091823S	Oral and Maxillofacial Surgery V	3							
090174S	Medical Specialities II This study module contains: 090174S-01 Internal Medicine for Dental Students (0.8 Credits), 090174S-02 Clinical microbiology (2.1 Credits), 090174S-03 Neurology (0.4 Credits), 090174S-04 Clinical Pharmacology (1.0 Credits), 090174S-05 Psychiatry (0.4 Credits) and 090174S-06 Forensic Dentistry (0.3 Credits)	5							
091755S	Periodontology V	3							
	3. Rehabilitation of the occlusion								
091732A	Stomatognathic Physiology II (pathofunction)	4					4		
091833A	Prosthetics I This study module contains: 091833A-01 Fixed Prosthodontics I (3.5 Credits), 091833A-02 Removable Prosthodontics I (3 Credits), 091833A-03 Dental	9							9

	Materials (1.5 Credits) and 091833A-04 Periodontology III (1 Credits)								
091833S	<p>Prosthetics II</p> <p>This study module contains:</p> <p>091833S-01 Fixed Prosthodontics II (1.0 Credits), 091833S-02 Removable Prosthodontics II (2.0 Credits), 091833S-03 Stomatognathic Physiology III (1.0 Credit) and 091833S-04 Implant Dentistry I (1.0 Credit)</p>	5							5
091834S	<p>Prosthetics III</p> <p>This study module contains:</p> <p>091834S-01 Prosthetic Management for Advanced Cases (1.0 Credits) and 091834S-02 Implant Dentistry II (1.0 Credit)</p>	2							
	4. Basic knowledge and skills in surgery								
090185S	<p>Dentoalveolar Surgery</p> <p>This study module contains:</p> <p>090185S-01 Oral and Maxillofacial Surgery II (3.3 Credits), 090185S-02 Periodontal Surgery I (2.0 Credits), 090185S-03 Oral Radiology II (1.2 Credits), and 090185S-05 Oral and Maxillofacial Rehabilitation (0.5 Credits)</p>	7							7
090186S	<p>Injuries and Odontogenic Infections</p> <p>This study module contains:</p> <p>090186S-01 Oral Radiology III (0.8 Credits), 090186S-04 Anaesthesiology (1 Credits), 090186S-05 Periodontic-Endodontic lesions 2 h and 090186S-06 Oral and Maxillofacial Surgery IV (3,2 credits)</p>	5							
091753S	Periodontal Surgery II	1							
	5. Growth and development								
090177A	<p>Paediatric Dentistry</p> <p>This study module contains:</p>								

	090177A-01 Paediatrics (0.5 Credits), 090177A-02 Pedodontics (2.7 Credits), 090177A-03 Periodontology IV (0.3 Credits), 090177A-04 Healthcare III (1 Credit), and 090177A-05 Oral and maxillofacial surgery III (0.5 Credits) and 090177A-06 Abnormal eruption patterns of permanent teeth 2 h	5							5
091773S	Orthodontics II	3							
	6. Basic knowledge and skills in science								
043002Y	Knowledge and research I: Scientific writing	3	3						
043003Y	Knowledge and research I : Literature retrieval	2	2						
043004Y	Knowledge and research II: Scientific communication	5		5					
043005Y	Knowledge and Research III: Data-analysis					3			
091601S	Study plan	4							
091602S	Thesis	16							
040300A	Maturity exam (native language)	0							
	7. Final grades in Dentistry								
091510A	Cariology, Endodontology and Pediatric Dentistry, final grade This study module contains: 091510A-01 Cariology, Endodontology and Pediatric Dentistry, final examination (0 Credits) and 091510A-02 Cariology, Endodontology and Pediatric Dentistry, Clinical Training, grade (0 Credits)	0							
091520A	Oral and Maxillofacial Surgery, final grade This study module contains: 091520A-01 Oral and Maxillofacial Surgery, final examination (0	0							

	Credits) and 091520A-02 Oral and Maxillofacial Surgery, Clinical Training, grade (0 Credits)								
091530A	Prosthetic Dentistry and Stomatognathic Physiology, final grade This study module contains: 091530A-01 Prosthetic Dentistry and Stomatognathic Physiology, final examination (0 Credits) and 091530A-02 Prosthetic Dentistry and Stomatognathic Physiology, Clinical Training, grade (0 Credits)	0							
091550A	Periodontology and Geriatric Dentistry, final grade This study module contains: 091550A-01 Periodontology and Geriatric Dentistry, final examination (0 Credits) and 091550A-02 Periodontology and Geriatric Dentistry, Clinical Training, grade (0 Credits)	0							
091560A	Oral Radiology, final grade This study module contains: 091560A-01 Oral Radiology, final examination (0 Credits) and 091560A-02 Oral Radiology, Clinical Training, grade (0 Credits)	0							
091570A	Oral Development and Orthodontics, final grade This study module contains: 091570A-01 Oral Development and Orthodontics, final examination (0 Credits) and 091570A-02 Oral Development and Orthodontics, Clinical Training, grade (0 Credits)	0							
091580A	Healthcare, final grade This study module contains: 091580A-01 Healthcare, final examination (0 Credits) and 091580A-02 Healthcare, Clinical Training, grade (0 Credits)	0							
	Oral Pathology, final grade This study module contains:								

091590A	091590A-01 Oral Pathology, grade (0 Credits) and 091590A-02 Oral Pathology, Clinical Training, grade (0 Credits)	0							
	Sum		30	30	33	27	29	31	30
	Sum			60		60		60	

2.6. Final examination

To obtain the degree final examination has to be completed in following courses:

091510A Cariology, Endodontology and Pediatric Dentistry

091520A Oral and Maxillofacial Surgery

091530A Prosthetic Dentistry and Stomatognathic Physiology

091550A Periodontology and Geriatric Dentistry

091560A Oral Radiology

091570A Oral Development and Orthodontics

091580A Healthcare

091590A Oral Pathology

In advanced studies the student concentrates on some specific topic, which has scientific relevance in Dentistry. Advanced studies include thesis work (20 ECTS credits) and oral presentation.

2.7. Examination and Assessment Regulations

Assessment is based on written and oral examinations, objective structured clinical examination (4th yr), exercises, essays, field work, supervised clinical work and self-assessment, reports or any other method determined pedagogically appropriate for the particular course. All the exams can be retaken. Additional information is given from the organizing subject. Clinical work is assessed 4th and 5th years.

Grades used for assessment of the courses are: 5 (excellent; ECTS A), 4 (very good; ECTS B), 3 (good; ECTS C), 2 (satisfactory; ECTS D), 1 (sufficient; ECTS E); fail.

Tutkintorakenteet

Licentiate of Dentistry 2020-2021 (E)

Tutkintorakenteen tila: published

Lukuvuosi: 2020-21

Lukuvuoden alkamispäivämäärä: 01.08.2020

Language studies (vähintään 6 op)

902155Y: Medical English, 3 op

901039Y: Second Official Language (Swedish), Oral Skills, 2 op

901038Y: Second Official Language (Swedish), Written Skills, 1 op

Medicine

A540141: Anatomy and Medical cell and developmental biology, 21 op

Compulsory

043010P: Anatomy: Medical cell and developmental biology, 7 op

043011P: Anatomy: Musculoskeletal system, 3 op

043012P: Anatomy: Organ systems, 3 op

043013P: Anatomy: Neuroanatomy, 3 op

043014P: Anatomy: Histology exercise, 2 op

043015P: Anatomy: Macroscopic anatomy exercise, 3 op

043053P: Basic skills in doctor-patient relationship, 3 op

043052P: General Pathology, 5 op

043026P: Genomic Medicine I, 2 op

A540142: Medical Biochemistry and Molecular Biology, 13 op

Compulsory

043020P: Medical Biochemistry and Molecular Biology: Basics of the molecular biology, 2 op

043021P: Medical Biochemistry and Molecular Biology: Basics of the metabolism, 3 op

043022P: Medical Biochemistry and Molecular Biology: Hormones and biochemistry of tissues, 2 op

043023P: Seminars and exercises of Medical Biochemistry and Molecular Biology, 2 op

043024P: Practical laboratory working in Medical Biochemistry and Molecular Biology, 2 op

043025P: Final exam of Medical Biochemistry and Molecular Medicine, 2 op

A540144: Microbiology and immunology, 10 op

Compulsory

043040P: Immunology, 4 op

043041P: Microbiology, 6 op

A540145: Pharmacology and toxicology, 10 op

Compulsory

043045P: Pharmacology and toxicology PART I, 4 op

043046P: Pharmacology and toxicology PART II, 5 op

043047P: Pharmacology and toxicology PART III, 1 op

A540143: Physiology, 15 op

Compulsory

- 043030P: Physiology, term paper, 2 op
- 043031P: Physiology interim exam, 5 op
- 043032P: Physiology group works, 2 op
- 043033P: Physiology final examination, 6 op
- 043027P: Psychology for Medical Students, 4 op
- 043037P: Public Health, 6 op
- 043038P: Radiation Safety in Medicine, 2 op

Basic knowledge and skills in dentistry

- 091782S: Acting as a Dentist in the Oral Health Care System, 3 op
 - Compulsory*
 - 091782S-02: Acting as a Dentist in the Oral Health Care System, 0 op
 - 091782S-01: Immediate Supervisor of Oral Health Care, 0 op
- 090603S: Advanced Practical Training DC11, 30 op
- 091711A: Cariology I, 2 op
- A540231: Cariology II, 9 op
 - Compulsory*
 - 091792A: Controlling dental caries, 1 op
 - 091793A: Caries Risk, Diagnostics and Restorative Treatment, 8 op
- 091706A: Clinical Training DC10, 6 - 7 op
- 091701A: Clinical Training DC5, 1 op
- 091702A: Clinical Training DC6, 7 op
- 091703A: Clinical Training DC7, 8 op
- 091704A: Clinical Training DC8, 8 - 9 op
- 091705A: Clinical Training DC9, 8 op
- 091713A: Endodontics I, 2 op
- 091713S: Endodontics II, 2 op
- 090181Y: Growing identity as a dentist Part 1, 1 op
- 090182Y: Growing identity as a dentist Part 2, 0,5 op
- 090183Y: Growing identity as a dentist Part 3, 0,5 op
- 090182A: Introduction to Clinical Care, 5 op
 - Compulsory*
 - 090182A-01: Introduction to Clinical Work, 0 op
 - 090182A-03: Nutrition, 0 op
 - 090182A-04: Propedeutic Course on Surgery, 0 op
 - 090182A-05: Healthcare I, 0 op
 - 090182A-06: Healthcare II, 0 op
- 090171A: Introduction to Oral Health I, 3 op
- 090170P: Introduction to Oral Health II, 1 op
- 043001Y: Introduction to medical profession, 4 op
- 091607A: OSCE, 0 op
- 091781S: Oral Health Care Services and Costs, 2 op
- 091761A: Oral Radiology I, 4 op
- 091721A: Oral Surgery I, 4 op
- A540232: Orthodontics I, 6 - 7 op
 - Compulsory*
 - 091794A: Diagnostics in Orthodontics, 1 op
 - 091795A: Basic Orthodontic Skills, 5 - 6 op
- 091772S: Orthodontics III, 2 op
 - Compulsory*
 - 091772S-02: Pathology in occlusal development and adult orthodontics, 0 op
 - 091772S-01: ORTHO-Seminars 1-5, 0 op
- 091751A: Periodontology I, 5 op
- 091751S: Periodontology II, 2 op
- 091506S: Radiation Safety in Dentistry, 0,5 - 0,6 op
- 091731A: Stomatognathic Physiology I (orthofunction), 3 op

Oral diseases and overall health

- 091714S: Cariology III, 2 op
- 091791A: Diseases of Oral Mucosa, 3 op

091756A: Geriatric Dentistry, 3 op
 090173S: Medical Specialities I, 1 op
Compulsory
 090173S-01: Dermatology and Venereology, 0 op
 090173S-02: Otorhinolaryngology, 0 op

090174S: Medical Specialities II, 5 op
Compulsory
 090174S-01: Internal Medicine for Dental Students, 0 op
 090174S-02: Clinical microbiology, 0 op
 090174S-03: Neurology, 0 op
 090174S-04: Clinical Pharmacology, 0 op
 090174S-05: Psychiatry, 0 op
 090174S-06: Forensic Dentistry, 0 op
 091823S: Oral and Maxillofacial Surgery V, 3 op
 091791S: Oral pathology, 5 - 6 op
 091755S: Periodontology V, 2 - 3 op
 080206A: Prescriptions, 0,5 op

Rehabilitation of the occlusion

091834S: , 2 op
Compulsory
 091834S-01: Prosthetic Management for Advanced Cases, 0 op
 091834S-02: Implant Dentistry II, 0 op
 091833A: Prosthetics I, 9 op
Compulsory
 091833A-01: Fixed Prosthodontics I, 0 op
 091833A-02: Removable Prosthodontics I, 0 op
 091833A-03: Dental Materials, 0 op
 091833A-04: Periodontology III, 0 op
 091833S: Prosthetics II, 5 op
Compulsory
 091833S-01: Fixed prosthodontics II, 0 op
 091833S-02: Removable prosthodontics II, 0 op
 091833S-03: Stomatognathic Physiology III, 0 op
 091833S-04: Implant Dentistry I, 0 op
 091732A: Stomatognathic Physiology II (pathofunction), 4 op

Basic knowledge and skills in surgery

090185S: Dentoalveolar Surgery, 7 op
Compulsory
 090185S-01: Oral and Maxillofacial Surgery II, 0 op
 090185S-02: Periodontal Surgery I, 0 op
 090185S-03: Oral Radiology II, 0 op
 090185S-05: Oral and Maxillofacial Rehabilitation, 0 op
 090186S: Injuries and Odontogenic Infections, 5 op
Compulsory
 090186S-04: Anaesthesiology, 0 op
 090186S-06: Oral Surgery IV, 0 op
 090186S-05: Perio-endo problems, 0 op
 090186S-01: Oral Radiology III, 0 op
 091753S: Periodontal Surgery II, 1 op

Growth and development

091773S: Orthodontics II, 3 op
 090177A: Paediatric Dentistry, 5 op
Compulsory
 090177A-05: Pediatric oral and maxillofacial surgery, 0 op
 090177A-06: Abnormal eruption of permanent tooth, 0 op

- 090177A-03: Periodontology IV, 0 op
- 090177A-02: Pedodontics, 0 op
- 090177A-01: Paediatrics, 0 op
- 090177A-04: Oral Health and Health Service System, 0 op

Basic knowledge and skills in science

- 043003Y: Knowledge and Research I: Literature retrieval, 2 op
- 043002Y: Knowledge and Research I: Scientific writing, 3 op
- 043004Y: Knowledge and Research II: Scientific communication, 5 op
- 043005Y: Knowledge and Research III: Data analysis, 3 op
- 040300A: Maturity exam (native language), 0 op
- 091601S: Study plan, 4 op
- 091602S: Thesis, 16 op

Final grades in dentistry

- 091510A: Cariology, Endodontology and Pediatric Dentistry, final grade, 0 op
 - Compulsory*
 - 091510A-01: Cariology, Endodontology and Pediatric Dentistry, final examination, 0 op
 - 091510A-02: Cariology, Endodontology and Pediatric Dentistry, Clinical Training, grade, 0 op
- 091580A: Healthcare, final grade, 0 op
 - Compulsory*
 - 091580A-01: Healthcare, final examination, 0 op
 - 091580A-02: Healthcare, Clinical Training, grade, 0 op
- 091570A: Oral Development and Orthodontics, final grade, 0 op
 - Compulsory*
 - 091570A-01: Oral Development and Orthodontics, final examination, 0 op
 - 091570A-02: Oral Development and Orthodontics, Clinical Training, grade, 0 op
- 091590A: Oral Pathology, final grade, 0 op
 - Compulsory*
 - 091590A-01: Oral Pathology, grade, 0 op
 - 091590A-02: Oral Pathology, Clinical Training, grade, 0 op
- 091560A: Oral Radiology, final grade, 0 op
 - Compulsory*
 - 091560A-01: Oral Radiology, final examination, 0 op
 - 091560A-02: Oral Radiology, Clinical Training, grade, 0 op
- 091520A: Oral and Maxillofacial Surgery, final grade, 0 op
 - Compulsory*
 - 091520A-01: Oral and Maxillofacial Surgery, final examination, 0 op
 - 091520A-02: Oral and Maxillofacial Surgery, Clinical Training, grade, 0 op
- 091550A: Periodontology and Geriatric Dentistry, final grade, 0 op
 - Compulsory*
 - 091550A-01: Periodontology and Geriatric Dentistry, final examination, 0 op
 - 091550A-02: Periodontology and Geriatric Dentistry, Clinical Training, grade, 0 op
- 091530A: Prosthetic Dentistry and Stomatognathic Physiology, final grade, 0 op
 - Compulsory*
 - 091530A-01: Prosthetic Dentistry and Stomatognathic Physiology, final examination, 0 op
 - 091530A-02: Prosthetic Dentistry and Stomatognathic Physiology, Clinical Training, grade, 0 op

Tutkintorakenteisiin kuulumattomat opintokokonaisuudet ja -jaksot

- 090171A-01: Introduction to Development of Occlusion and Orthodontics, 0 op
- 090171A-02: Organization and Providers of Oral Health Care Services, 0 op

Opintojaksojen kuvaukset

Tutkintorakenteisiin kuuluvien opintokohteiden kuvaukset

902155Y: Medical English, 3 op

Voimassaolo: 01.01.2017 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Languages and Communication

Arvostelu: 1 - 5, pass, fail

Opettajat: Eva Braidwood

Opintokohteen kielet: English

Leikkaavuudet:

ay902155Y Medical English (OPEN UNI) 3.0 op

Proficiency level:

B2-C1

Status:

This course is compulsory for students of medicine and dentistry. It is recommended for 1st year students.

Required proficiency level:

Students are expected to have had English as their A1 or A2 language at school or have acquired equivalent skills.

ECTS Credits:

3 op /ECTS = 80 hrs

Language of instruction:

English

Timing:

The course consists of 3 modules. Module 1 is held in the autumn semester, during period I & II. Groups in Module 2 are held in periods II and III, and Module 3 is held in period IV.

Learning outcomes:

Having completed the course successfully, students will be able to:

- understand and use basic medical terminology appropriately, and learn strategies for expanding your own medical vocabulary (MODULES 1 & 2);
- understand medical case reports related to specific body systems (MODULE 2);
- demonstrate your ability to communicate effectively with patients (patient-centred interviewing), and discuss cases with medical professionals using professional medical English (MODULE 2);
- discuss and present topics of interest in clinical psychology (MODULE 3);
- follow the conventions of scientific communication and general medical practice (MODULE 2);
- produce specific text types in English (scientific summary and scientific poster) (MODULES 1 & 3).

Contents:

The course consists of three modules.

Module 1 is integrated with the Cell Biology course. Students learn the structure, rules and conventions of appropriate language use in scientific reports and practice writing a scientific summary in English. This module is scheduled for Year 1 Period I (autumn semester in the first year).

Module 2 focuses on medical terminology and anatomy. Students learn the basics of medical terminology, and develop their own strategy for mastering English medical terms related to the body systems and their functions. Students will read case reports and learn about effective doctor-patient and doctor-doctor communication. This module is scheduled in Year 1 Period II-IV.

Module 3 is integrated with the course in clinical psychology. Students will report about the case studies they analyse and discuss in the Clinical Psychology course. To this end, they will work in teams and prepare a scientific abstract and an e-poster in English, which they will present in a mini-conference at the end of the term. This module is scheduled in Year 1 Period IV.

Mode of delivery:

Module 1: lectures supported by web-based practice and tutorials (writing clinic)

Module 2: contact teaching with online elements and web-based practice

Module 3: small group sessions with online support (the same groups as in the Clinical psychology course)

Learning activities and teaching methods:

Module 1: 12 hrs = 0.5 ECTS

12 hrs of guided teaching in the form of 1 lecture, 10 hrs independent work online, tutorial if needed

Module 2: 54 hrs = 2 ECTS

20-26 hrs guided teaching and 34-28 hrs independent work – Alternatively, students with C1 language skills can complete the course by participating in 10-14 hrs contact lessons and 40 hrs self-study and team work.

Module 3: 14 hrs = 0.5 ECTS credits

8-10 hrs guided teaching, online learning and team work, 4-6 hrs participating in mini-conference.

Target group:

Students studying medicine and dentistry; in the first year of their studies at the Faculty of Medicine.

Prerequisites and co-requisites:

Students taking the course should have studied English as their first foreign language and should have B1-B2-level language skills (CEFR scale).

Recommended optional programme components:

The course is integrated with Cell biology and Clinical psychology.

Recommended or required reading:

The course material is based on scientific texts and publications in leading medical journals. The selection of texts varies every year depending on the leading themes in the field (cell biology, clinical psychology). Module 2 is based on common medical terminology material and anatomy and physiology texts as well as case reports published in leading medical journals. The selection of material and sources are available for students in the university's electronic learning platform (Moodle) and through the university library.

Assessment methods and criteria:

The course utilises continuous assessment. During the three modules students will be compiling a learning journal with glossary. The journal contains the texts students produce in Module 1 and Module 3, the glossary of medical terms they compile in Module 2 and additional learning material they use and produce for doctor-patient communication (sample dialogues, extracts from case reports). Peer-feedback will also be utilised and counted in the final assessment. The assessment criteria and matrix will be available in Moodle.

Grading:

The course uses continuous assessment and numerical grading scale 1-5.

Person responsible:

Eva Braidwood

Working life cooperation:

The course includes guest lectures as and when available.

Other information:

Students with advanced (C1) language skills can complete the alternative version of Module 2 (less contact hrs and more independent/team work).

901039Y: Second Official Language (Swedish), Oral Skills, 2 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Languages and Communication

Opintokohteen kielet: Swedish

Leikkaavuudet:

ay901039Y Second Official Language (Swedish), Oral Skills (OPEN UNI) 2.0 op

Proficiency level:

This course is only for Finnish speaking students with CEFR-level A2-B1 in Swedish language. There are no beginner courses in Swedish at the university.

901038Y: Second Official Language (Swedish), Written Skills, 1 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Language and Communication Studies

Laji: Course

Vastuuyksikkö: Languages and Communication

Opintokohteen kielet: Swedish

Leikkaavuudet:

ay901038Y Second Official Language (Swedish), Written Skills (OPEN UNI) 1.0 op

Proficiency level:

This course is only for Finnish speaking students with CEFR-level A2 in Swedish language. We don't offer Beginners courses in Swedish.

A540141: Anatomy and Medical cell and developmental biology, 21 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Basic Studies

Laji: Study module

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuukkanen, Kaarlo Juha Kullervo, Lehenkari, Petri Pauli

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

21 ECTS credits / 567 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in the autumn semester. The course is recommended to complete mainly at the first autumn semester of medical or dental studies.

Learning outcomes:

Upon completion of the course the student should be able to:

- understand the structure, development and function of the human body in order to manage the rest of the preclinical and clinical studies
- identify and describe the structures essential for all medical doctors in diagnostics and treatment, especially for first aid.
- demonstrate common anatomical knowledge for understanding medical theory and research and for dealing with evidence based medicine.

Upon completion of the medical cell and developmental biology part of the course the student should be able to:

- describe the structure of various cell types (especially mammalian cells) and the structure and function of cell organelles
- describe cell growth and cell division
- present the principles of the regulation of cell function and genetic regulation
- list the common research techniques in cell biology
- display an understanding of gametogenesis, fertilization, embryonal development (0-40days) and its regulation as well as the development of embryonal malformations.
- display an understanding of human growth and development.

- identify and describe the basic tissues of the human body and the microscopic structure of the tissues for understanding their normal and pathological function

Upon completion of the anatomy part of the course the student should be able to

- describe the structure of the organs and their topography in the body as well as surface projections of the internal organs.
- understand the main principles of the embryonal development.
- recognize the main histological structures that are important for the function of the organs as well as structures which are important for pathological processes.
- demonstrate the organs in living body, in preparations of the cadavers, anatomical models, X-ray images, diagrammatic drawing and in manual examination.

Contents:

- 043010P Anatomy: Medical cell and developmental biology 7 ECTS
- 043011P Anatomy: Musculoskeletal system 3 ECTS
- 043012P Anatomy: Organ systems 3 ECTS
- 043013P Anatomy: Neuroanatomy 3 ECTS
- 043014P Anatomy: Histology exercise 2 ECTS
- 043015P Anatomy: Macroscopic anatomy exercise 3 ECTS

Mode of delivery:

Face-to-face teaching.

Learning activities and teaching methods:

Lectures 140h / small group exercise 75h / Self-study 352 h (includes essay). Small group teaching will be provided in 2-4 h exercises. Each student will have 1-2 exercise sessions per week. Writing an essay in cell and developmental biology. In addition the dental students have at the 2nd term tooth development, histology and morphology given by the department of Dentistry. Anatomy study module includes an optional course of the anatomical dissection (2 ECTS credits)

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

The course must be completed during the preclinical stage of studies.

Recommended or required reading:

Anatomy

Textbooks:

R.L. Drake, A.W. Vogl, A.W.M. Mitchell: Gray's Anatomy for students. Elsevier Churchill Livingstone (latest edition) or K.L. Moore: Clinically oriented Anatomy, Williams & Wilkins co (latest edition)

Atlas:

R. Putz, R. Pabst: Sobotta, Atlas of human anatomy, Vols I-II. Elsevier Urban&Fischer, München (latest edition) or F. H. Netter: Atlas of human anatomy or Thieme Atlas of Anatomy, Latin Nomenclature.

Pocket atlas:

H. Feneis: "Pocket Atlas of Human Anatomy, G. Thieme Pub. Stuttgart, (latest edition) (Thieme Flexibook) or Dorland's/Gray's Pocket Atlas of Anatomy Richard L. Drake, A. Wayne Vogl,

Neuroanatomy

W. Kahle, H. Leonhardt, W. Platzer: "Color Atlas and Textbook of Human Anatomy" Vol. 3: Central Nervous System and Sensory Organs (W. Kahle)

G. Thieme Pub. Stuttgart, (latest edition) (Thieme Flexibook)

Embryology:

T.W. Sadler: Langman's Medical Embryology. Williams&Wilkins co, Baltimore or

Cell Biology:

A.L. Kierszenbaum: Histology and Cell Biology: an introduction to pathology. Mosby, St Louis, (latest edition).

Additional material: H.Lodish, A.Berk, C.A.Kaiser, M.Krieger, M.P.Scott, A.Bretscher, H.Ploegh: Molecular Cell Biology. W.H.Freeman and Co, New York (latest edition).

Histology:

A.L. Kierszenbaum: Histology and Cell Biology: an introduction to pathology. Mosby, St Louis, (latest edition) or B.

Young, J.S. Lowe, A. Stevens, J.W. Heath: Wheater's Functional Histology, A Text and Colour Atlas. Elsevier, Churchill Livingstone

Histology atlas can be found also in Thiemen e-books. (Color Atlas of Cytology, Histology and Microscopic Anatomy, 4th edition).

Web material:

<http://herkules.oulu.fi/isbn9789514293238/> collection of essays written by students from previous courses of Medical cell and developmental biology.

Assessment methods and criteria:

-

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail. The final grading includes final examination and the assessment of the essay writing.

Person responsible:

Professor Juha Tuukkanen ja Petri Lehenkari

Other information:

Evaluation of the course as total is obligatory.

Compulsory

043010P: Anatomy: Medical cell and developmental biology, 7 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Lehenkari, Petri Pauli

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

7 ECTS credits / 189 hours of work

Language of instruction:

Finnish, some material in English

Timing:

The course is held in the first autumn semester in the curriculum of medical and dental studies.

Learning outcomes:

The course is specifically designed to enable future clinical work of a medical or dentistry licentiate. Upon completion of the medical cell and developmental biology course the student

- is able to describe the structure of various cell types (especially mammalian cells) and the structure and function of cell organelles.
- can describe cell growth and cell division, present the principles of the regulation of cell function and genetic regulation and list the common research techniques in cell biology.
- can understand gametogenesis, fertilization and embryonal development (0-40days) and its regulation as well as human growth and development including the development of embryonal malformations
- can identify and describe the basic tissues of the human body and the microscopic structure of the tissues for understanding their normal and pathological function
- knows how to find original publications and evaluate them critically.
- knows how to use scientific information and the principles of scientific work in the form of the essay, which is integrated with English and Knowledge and research I studies.

Contents:

Cell Biology: Cell Evolution and Human Origin, Cell Types and Cell Research Methods, Cell Structures, Genes, and Expression of Genetic Information, Regulating Cell Functioning and Differentiation
Basics of histology and cell function at tissue level: epithelial tissue, connective tissue, nerve tissue, special cellular structures, cancer cells, and cellular dysfunction

Basics of Developmental Biology: Gender Cells and Their Activity, Fertilization, Human development at 2-4. week, placenta, developmental abnormalities, the developmental biology of various organs from week 4 to adult

Mode of delivery:

Blended teaching, consisting of lectures and tuition for essays.

Learning activities and teaching methods:

Lectures 56 h / self-study 189 h (includes essay). The essay is done in collaboration with English and Knowledge and research I: Scientific writing course.

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

High school biology

Recommended optional programme components:

The anatomy course (A540141) consists of medical cell and developmental biology, musculoskeletal, organ and neuroanatomy sections, as well as macroscopic anatomy and histology practicals, all of which are integrated and taught partially overlapping, especially developmental biology is taught for each organ in the context of the macroscopic anatomy.

Recommended or required reading:

In cell biology studies we utilise material produced by previous students, (<http://jultika.oulu.fi/files/isbn9789526209296.pdf>), additionally, we use free resources from the internet, as advised during the course and virtual Histology.

To study embryology, we recommend to use the same book as intended for all other anatomy studies: Sobotta Anatomy Textbook: English Edition with Latin Nomenclature, Friedrich Paulsen, Tobias M. Böcker, Jens Waschke, Elsevier Health Sciences, 2.12.2018

As additional material for further studies in cell biology the following book can also be used: A.L. Kierszenbaum: Histology and Cell Biology: an introduction to pathology. Mosby, St Louis

Assessment methods and criteria:

As a part of this course, the students will be compiling an essay, which will be assessed. The assessment of the whole course consists also of final examination.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail. The final grading includes final examination and the assessment of the essay writing.

Person responsible:

Professor Petri Lehenkari

Working life cooperation:

-

Other information:

-

043011P: Anatomy: Musculoskeletal system, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Lehenkari, Petri Pauli

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

3 ECTS credits / 81 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in the autumn semester. The course is recommended to complete at the first autumn semester of medical or dental studies.

Learning outcomes:

After the course student:

- Is familiar with the structure and function of the skeleton, muscles, nerve tissue and blood vessels of the head, spine, hips and limbs, and the lymphatic system, so that is able to embrace other preclinical and clinical training and make use of these skills and knowledge of human anatomy in clinical work and in the medical and dental profession.
- Understands the basics of musculoskeletal functions and interrelation and the basics of biomechanics
- Is able to perceive and recognize the three-dimensional structures and biomechanics of the musculoskeletal system in a living person, in tissue models, in imaging, such as x-rays and in diagrams

Contents:

Skull, limbs, spinal and pelvic bones, muscles, tendons, ligaments, lymphatic, vascular and nerve anatomy, musculoskeletal function and basics of clinical musculoskeletal assessment and imaging.

Mode of delivery:

Lectures and macroscopic anatomy practicals (043015P).

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Learning activities and teaching methods:

Lectures 22 h, exam 2 h, self-study 57 h.

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

The anatomy course consists of medical cell and developmental biology, musculoskeletal, organ and neuroanatomy sections, as well as macroscopic anatomy and histology practicals, all of which are integrated and taught partially overlapping, especially developmental biology is taught for each organ in the context of the macroscopic anatomy.

Recommended or required reading:

Sobotta Anatomy Textbook: English Edition with Latin Nomenclature Edited by Friedrich Paulsen, Tobias M. Böckers, Jens Waschke ISBN 978-3-437-44080-9 Elsevier GmbH, Munich, Germany 1st edition, 2019

Assessment methods and criteria:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Petri Lehenkari

Working life cooperation:

Some of the lecturers are clinicians, the clinical assessment of students and possibly demonstrations with patients are used in the teaching

Other information:

Study entities completed in other medical faculty with same content and, extent may be accepted as compensatory credits

043012P: Anatomy: Organ systems, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuukkanen, Kaarlo Juha Kullervo

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

3 ECTS credits / 81 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in the autumn semester. The course is recommended to complete at the first autumn semester of medical or dental studies.

Learning outcomes:

Upon completion of the organ anatomy part of the course the student

- is able to describe the structure of the organs and their topography in the body as well as surface projections of the internal organs.
- understands the main principles of the embryonal development.
- is able to demonstrate the organs in living body, in preparations of the cadavers, anatomical models, X-ray images, diagrammatic drawings and in manual examination and understands the principles of topographic anatomy and projection of structures in various imaging techniques.
- can recognize normal structures in manual examination and understands the principles of anatomical variation.
- understands the normal function of the organ systems.
- is able to acquire other preclinical and clinical studies and use the knowledge of anatomy in clinical work in the medical and dental profession

Contents:

Systemic anatomy: cardiovascular system and lymphatic system, thorax and respiratory system, abdomen and alimentary system, integument, pelvis, urinary system, genital systems, and endocrine system. Regional anatomy and topographical anatomy, organ development and histology integrated with the previous titles. Examples of the applications of the anatomical knowledge in clinical cases and manual palpation of main organs and structures.

Mode of delivery:

Lectures and macroscopic anatomy practicals (043015P).

Learning activities and teaching methods:

Lectures 32 h / self-study 118 h

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

The anatomy course consists of medical cell and developmental biology, musculoskeletal, organ and neuroanatomy sections, as well as macroscopic anatomy and histology practicals, all of which are integrated and partially overlapping. The course is intended to be completed during the preclinical studies.

Recommended or required reading:

Textbooks

To study anatomy, we recommend to use the same integrated book as intended for all other anatomy studies:

Sobotta Anatomy Textbook: English Edition with Latin Nomenclature. Edited by Friedrich Paulsen, Tobias M. Böckers, Jens Waschke. Elsevier GmbH, Munich, Germany 1st edition, 2019 (ISBN 978-3-437-44080-9)

Assessment methods and criteria:

After the course an exam where material from anatomy practicals (043015P) and neuroanatomy lectures is assessed.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Juha Tuukkanen

Working life cooperation:

Some of the lecturers are clinicians and the clinical methods of assessment in demonstrations with students are used in the teaching

Other information:

Study entities completed in other medical faculty with same content and, extent may be accepted as compensatory credits

043013P: Anatomy: Neuroanatomy, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuukkanen, Kaarlo Juha Kullervo

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

3 ECTS credits / 81 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in the autumn semester. The course is recommended to complete at the first autumn semester of medical or dental studies.

Learning outcomes:

Upon completion of the neuroanatomy course the student:

- is able to describe the structure and location of the central nervous system and the somatic and autonomous divisions of the peripheral nervous system and the principles of their embryologic development
- knows the structures that surround the central nervous system, the meninges and the formation and circulation of the cerebrospinal fluid
- understands the blood supply of the central nervous system and the symptoms related to circulatory diseases.
- can describe cranial nerves, main motor and sensory pathways and the structure and function of visual, hearing and balance systems
- can describe the structure of limbic system and the main principles of its functions
- can localize the structures in a living body, cadaver, anatomical models, x-ray (CT/MRI) images and drawings
- is able to acquire other preclinical and clinical studies and use the knowledge of neuroanatomy in clinical work in the medical and dental profession

-

Contents:

- Cerebral structure and the functional cortical areas
- Spinal cord
- Brainstem
- Cerebellum
- Diencephalon
- Telencephalon
- Cerebral vessels
- Meninges
- Ventricular system and adjacent structures
- Cranial nerves
- Peripheral and autonomic nervous systems
- Somatic motor and somatosensory systems
- Limbic system
- Sensory organs eye and ear and auditory, vestibular and visual systems

Mode of delivery:

Lectures and macroscopic anatomy practicals (043015P)

.

Learning activities and teaching methods:

Lectures 24 h, exam 2 h, self-study 55 h.

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

The anatomy course consists of medical cell and developmental biology, musculoskeletal, organ and neuroanatomy sections, as well as macroscopic anatomy and histology practicals, all of which are integrated and partially overlapping.

Recommended or required reading:

Textbooks

To study neuroanatomy, we recommend to use the same integrated book as intended for all other anatomy studies:

Sobotta Anatomy Textbook: English Edition with Latin Nomenclature. Edited by Friedrich Paulsen, Tobias M. Böckers, Jens Waschke. Elsevier GmbH, Munich, Germany 1st edition, 2019 (ISBN 978-3-437-44080-9)

Assessment methods and criteria:

After the course an exam where material from anatomy practicals (043015P) and neuroanatomy lectures is assessed

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Juha Tuukkanen

Working life cooperation:

Some of the lecturers are clinicians and the clinical methods of assessment in demonstrations with students are used in the teaching

Other information:

Study entities completed in other medical faculty with same content and, extent may be accepted as compensatory credits

043014P: Anatomy: Histology exercise, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Sanna Palosaari, Lehenkari, Petri Pauli

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS credits / 54 hours of work

Language of instruction:

Finnish and some material in English

Timing:

The course is scheduled in the first autumn semester of medicine and dentistry curriculum.

Learning outcomes:

Upon completion of the small group exercises of histology the student

- learns how to use a light microscope, knows other microscopy techniques and common staining and sample preparation methods.
- can identify the normal cells and structures in each organ systems in microscope preparations and virtual microscopy images

- has sufficient grounds of healthy tissue for understanding pathological changes in pathology and other clinical courses

-

Contents:

Use of a microscope, histological techniques, histology of basic tissues and normal histology of organs. In exercises H2-H6 is learned to recognize the type of tissue and its cells and special structures. In exercises H7-H14 we is learned how to identify organs on the basis of histological structures, the special structures of the organs, and how the structure is related to the function.

Mode of delivery:

Teaching is carried out in a multidisciplinary form, and approved completion requires attendance in all contact classes or appropriate compensatory measures. The students familiarize themselves with the subject in advance using provided material and electronic preliminary exercises. Learning will be deepened in classroom teaching. Cell biology is a prerequisite for understanding histology. Histology deepens the understanding of macroscopic anatomy but also requires knowledge of anatomy. The histology practical exercises are scheduled to proceed consistently with cell biology and anatomy lectures

Learning activities and teaching methods:

Small group exercise 30 h / Self-study 24 h. Small group teaching will be provided in 2-4 h exercises, where the students practice microscopic anatomy by studying histological preparations themselves by microscopy and virtual microscopy. There is a test during exercise and attendance of 100% at the course is required. Group change is allowed between students.

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

Preparatory part for histology is included in the lectures of cell and developmental biology and anatomy. In addition, students are expected familiarizing to the subject of each exercise in advance with provided material and electronic preliminary exercises

Recommended optional programme components:

The course must be completed during the preclinical stage of medical and dentistry studies and is a prerequisite for understanding physiology and acquiring other clinical knowledge. Histology practical exercises aim at deepening the understanding of macroscopic anatomy in the scale of microscopic structures and expanding cell biological understanding to the structure and function of macroscopic organ.

Recommended or required reading:

Textbooks:

A.L. Kierszenbaum: Histology and Cell Biology: an introduction to pathology. Mosby, St Louis (latest ed.) <https://ebookcentral.proquest.com/lib/oulu-ebooks/detail.action?docID=2074641> or B. Young, J.S. Lowe, A. Stevens, J.W. Heath: Wheater's Functional Histology, A Text and Colour Atlas. Elsevier, Churchill Livingstone (latest ed.)

Open textbook of Anatomy and Physiology (<https://opentextbc.ca/anatomyandphysiology/>)

In addition to textbooks, preliminary material for each exercise is provided in Moodle learning environment. Virtual histology teaching material is operated on open source virtual microscopy program QuPath (<https://qupath.github.io/>)

Assessment methods and criteria:

This course unit utilizes continuous assessment. During the course unit, there are short tests on each topic (14 tests), each topic forms one group practical session. At least half of the tests should be passed.

Grading:

Individual small exams (21) are graded pass / fail. The numerical grading scale 1-5 is based on the number of passed individual small group assessments. At least half of the exams has to be passed to get the lowest grade 1.

Person responsible:

PhD Sanna Palosaari, Professor Petri Lehenkari

Working life cooperation:

Anatomy teaching is closely connected to clinical practice and organized in co-operation with hospital staff

Other information:

Study entities completed in other medical faculty with same content and, extent may be accepted as compensatory credits

043015P: Anatomy: Macroscopic anatomy exercise, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Antti Koskela, Tuukkanen, Kaarlo Juha Kullervo

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

3 ECTS credits / 81 hours of work.

Language of instruction:

Finnish

Timing:

The course is scheduled in the first autumn semester of medicine and dentistry curriculum.

Learning outcomes:

Upon completion of the small group exercises of macroscopic anatomy the student is able to

- describe the structure of the organs and their topography in the body as well as surface projections of the internal organs
- demonstrate the organs in living body, in preparations of the cadavers, anatomical models, X-ray images, CT / MR imaging, ultrasound imaging, diagrammatic drawings and in manual examination

Contents:

Systemic anatomy: cardiovascular system and lymphatic system, thorax and respiratory system, abdomen and alimentary system, integument, pelvis, urinary system, genital systems, and endocrine system. Regional anatomy and topographical anatomy, organ development and histology integrated with the previous titles. Examples of the applications of the anatomical knowledge in clinical cases and manual palpation of main organs and structures.

Mode of delivery:

Teaching is carried out in a multidisciplinary form, and approved completion requires attendance in all contact classes or appropriate compensatory measures. The students familiarize themselves with the subject in advance using provided material and preliminary exercises. The practical exercises are scheduled to proceed consistently with anatomy lectures

Learning activities and teaching methods:

Small group exercise 57 h / Self-study 81 h (includes self-study of the introductory exercise followed by examination). Small group teaching will be provided in 2-4 h exercises, where the student practice macroscopic anatomy with bones, anatomical models and palpation and x-ray images. There is an examination after each exercise and attendance of 100% at the course is required.

Target group:

First year medical and dental students.

Prerequisites and co-requisites:

Studying the exercise document and answering the preliminary questions before the small group exercise.

Recommended optional programme components:

The course must be completed during the preclinical stage of studies.

Recommended or required reading:

Textbooks

To study anatomy, we recommend to use the same integrated book as intended for all other anatomy studies:

Sobotta Anatomy Textbook: English Edition with Latin Nomenclature. Edited by Friedrich Paulsen, Tobias M. Böckers, Jens Waschke. Elsevier GmbH, Munich, Germany 1st edition, 2019 (ISBN 978-3-437-44080-9)

Assessment methods and criteria:

This course unit utilizes continuous assessment. During the course unit, there are small exams during each of the 21 group practical (pass / fail). The first orienting exercise is a terminology examination of the introductory document. The course is organized in blocks and at least half of the exams in each block should be passed.

Grading:

Individual small exams (21) are graded pass / fail. The numerical grading scale 1-5 is based on the number of passed individual small group assessments. At least half of the exams has to be passed to get the lowest grade 1

Person responsible:

Professor Juha Tuukkanen, MD, PhD Antti Koskela

Working life cooperation:

Some of the tutors are clinicians and the clinical methods of assessment in demonstrations with students are used in the teaching

Other information:

Study entities completed in other medical faculty with same content and, extent may be accepted as compensatory credits

043053P: Basic skills in doctor-patient relationship, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS /81 hours of work

Language of instruction:

Finnish

Timing:

The second year (C4), spring semester

Learning outcomes:

Upon completion of the course, the student is able to:

- distinguish the basic concepts of doctor-centered and patient-centered communication;
- describe the term "reflection" and know the different definitions of "reflection"
- describe the interprofessional team-work in the physician's as well as the dentist's work

Contents:

The course includes introduction to basic concepts of doctor-centered and patient-centered communication. Students will write reflection about their feelings concerning practical training in health centers and small group training

Mode of delivery:

Blended teaching. Moodle learning environment is used in teaching

Learning activities and teaching methods:

Seminar, small group teaching, exercise session for doctor-patient communication, practical period in health care center (3 days), and closing work-shop and writing reflection.

Target group:

The students from medicine and dentistry

Prerequisites and co-requisites:

C1

Recommended optional programme components:

The course has to be completed during preclinical period (the first two years) of medical and dental studies.

Recommended or required reading:

Course materials

Assessment methods and criteria:

Participation in the introductory seminar, small group teaching, exercise session for doctor-patient communication, practical period in health care center.

Grading:

Pass/fail

Person responsible:

Heli Vikeväinen

Working life cooperation:

The course includes training in health centers, where students follow and interview doctors.

043052P: General Pathology, 5 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Vesa-Matti Pohjanen, Mäkinen, Markus Juhana

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS

Language of instruction:

Finnish

Timing:

2nd year, autumn (C3/DC3)

Learning outcomes:

The course is designed to provide medical and dental students with the principles underlying the etiology, mechanisms and development of disease. It aims to prepare the students to identify and evaluate the morphological changes caused by various diseases as well as to understand the functional and clinical significance of these changes.

Upon completion the student will be expected to have acquired the knowledge of the basic disease mechanisms (etiology and pathogenesis), their basic morphological, functional and clinical characteristics, and the terminology related with diseases. The student should have acquired the skills to recognize the most common macroscopic and microscopic features of diseases and be able to reason the relationship between these features and the clinical manifestations of diseases.

Contents:

Cellular adaptation; cell and tissue injury; healing; infections and immunological mechanisms in disease; genetic and environmental causes of disease; inflammation; storage diseases; disorders of fluid balance and circulation; basic pathology of neoplastic diseases; diagnostic pathology; principles of cytology; cardiovascular pathology.

Mode of delivery:

Multifaceted teaching.

Learning activities and teaching methods:

Preliminary examination. Lectures 30 hours, small group teaching 21 hours. Self-study 80 hours. Written examinations 2 hours.

Target group:

Medical and dental students.

Prerequisites and co-requisites:

Preliminary examination. Previous documented completion of the courses of anatomy and physiology is recommended.

Recommended optional programme components:

The course has to be completed during the preclinical period of medical and dental studies.

Recommended or required reading:

Textbooks: Cross SS: Underwood's Pathology, a clinical approach (6th ed. 2013 or newer; sections: Basic pathology and General disease mechanisms); or Kumar V. et al.: Robbins Basic Pathology, (9th ed. 2013 or newer),

Alternatives: Kumar V. et al.: Robbins and Cotran, Pathologic basis of disease (8th ed. 2010 or newer). In Finnish: Mäkinen M. et al. Patologia, Duodecim, 2012 or newer.

Material provided during the course (in Finnish only): lecture handouts; guidebook for virtual microscopy demonstrations; guidebook for autopsy demonstrations.

Assessment methods and criteria:

Passed preliminary examination. Participation in the compulsory demonstrations and passing of the final examination.

Grading:

1-5/fail.

Person responsible:

Professor Markus Mäkinen

Working life cooperation:

Clinical demonstrations and teaching related to medical autopsies is organised in collaboration with the Department of Pathology, Oulu University Hospital.

Other information:

Participation in autopsies and autopsy demonstrations is voluntary, but targeted to medical and dental students only.

043026P: Genomic Medicine I, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine, Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Jukka Moilanen, Joni Mäki, Karppinen, Peppi Leena Elina

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS credits / 54 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in the spring semester of the 1st year.

Learning outcomes:

Upon completion of the course, the student

- understand major principles of the inheritance of man
- is capable to analyse the central characteristics and ethical issues of inherited diseases.
- will explore the usage of biobanks
- understands basics of the modern techniques in medical genetics.

Contents:

Basics of inheritance of man, selected basic methodology used in medical genetics, bioinformatics, biobanks, ethical aspects of genomics.

Mode of delivery:

Lectures, exercises and exam.

Learning activities and teaching methods:

18 hours of lectures, 4 hours of exercises, 2 hours exam and 30 hours of independent work.

Target group:

Major students.

Prerequisites and co-requisites:

Recommended course to be taken simultaneously:

- 043020P Basics of the Molecular Biology 2 ECTS

Recommended optional programme components:

-

Recommended or required reading:

Aittomäki, Moilanen ja Perola, 2016: Lääketieteellinen genetiikka. Duodecim.

Assessment methods and criteria:

Exam

Grading:

The course utilizes a numerical grading scale 1-5. Zero stands for a fail.

Person responsible:

Peppi Karppinen (implemetation of teaching and practical matters), Jukka Moilanen (responsible person of Genomic medicine I and II)

Working life cooperation:

-

Other information:

-

A540142: Medical Biochemistry and Molecular Biology, 13 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Basic Studies

Laji: Study module

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karppinen, Peppi Leena Elina

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

13 ECTS / 351 hours of work.

Language of instruction:

Finnish

Timing:

The course unit is held in the spring semester.

Learning outcomes:

Upon completion of the course, the student will be able to:

- explain genes structure, function and regulation both in normal physiology and diseases
- know what proteins are, how they are produced and what are their functions
- understand the nature of the mutations in genes, both in DNA and protein level
- recognize the central DNA-related techniques used currently in medicine, and understand their central applications
- recognize the sources of errors in diagnostic laboratory techniques
- know how to classify the enzymes and understand their functions in cellular systems, and understand principles of their use in diagnostics
- identify and name fundamental molecules in metabolism (carbohydrates, lipids, amino acids, nucleotides) and understand their realationships to the medicine
- name the most fundamental metabolic pathways and their metabolites, and understand the common regulation of the various metabolic pathways
- interpret the changes in metabolism of the diseases or other conditions
- classify and name the main hormones

- explain most common effects of the hormones on their target cells and tissues
- interpret the effects of abnormal hormonal regulation
- name the basic components of the extracellular matrix and connective tissue, and identify their specific functions in organs and medical relevance
- understand the general systemic roles of blood, its composition and clotting
- understand the role of hypoxia regulation in tissues, and its applications in medicine

Contents:

- 043020P Basics of the Molecular Biology 2 op
- 043021P Basics of the metabolism 3 op
- 043022P Hormones and biochemistry of tissues 2 op
- 043023P Seminars and exercises of Medical Biochemistry and Molecular Biology 2 op
- 043024P Practical laboratory working in Medical Biochemistry and Molecular Biology 2 op
- 043025P Final exam of Medical Biochemistry and Molecular Biology 2 op

Mode of delivery:

Lectures, laboratory work including tutorial teaching and verbal evaluation, tutorial teaching, theme day containing preliminary preparations, exams.

Learning activities and teaching methods:

Lectures 95 h, laboratory work including tutorial teaching and verbal evaluation 54 h, tutorial teaching 3 t, theme day containing preliminary preparations 8 h, remote educational tasks, exams 14 h. Independent work 177 h.

Target group:

Major students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

-

Recommended or required reading:

Rodwell, Bender, Botham, Kennelly, Weil (eds.): Harper's Illustrated Biochemistry, 31st edition, 2018

Assessment methods and criteria:

Medical biochemistry and molecular biology course includes 3 different intermediate exams which will be graded 1-5 (4 questions). Final exam consist of 5 essays, and will be graded 1-5. All the intermediate exams (043020P, 043021P, 043022P) should be passed before participation in final exam.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

-

Compulsory

043020P: Medical Biochemistry and Molecular Biology: Basics of the molecular biology, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Joni Mäki, Karppinen, Peppi Leena Elina

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS/54 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in the spring semester.

Learning outcomes:

Upon completion of the course, the student will be able to:

- explain genes structure, function and regulation both in normal physiology and diseases
- know what proteins are, how they are produced and what are their functions
- understand the nature of the mutations in genes, both in DNA and protein level
- recognize the central DNA-related techniques used currently in medicine, and understand their central applications
- recognize the sources of errors in diagnostic laboratory techniques
- know how to classify the enzymes and understand their functions in cellular systems, and understand principles of their use in diagnostics

Contents:

The structure, function and regulation of the genes; genetic code, mutations in genes and their effects on gene functions; DNA repairing mechanisms; proto-oncogenes, oncogenes, tumour suppressors, growth factors and cytokines; basics of DNA technology; properties of proteins and protein synthesis; classification and function of the enzymes; hypoxia response of the cells.

Mode of delivery:

Lectures and exam.

Learning activities and teaching methods:

26 hours of lectures and 3 hours exam and 25 hours independent work.

Target group:

Major students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

These courses are recommended to be completed in same Spring semester:

- 043021P Basics of the metabolism 3 ECTS
- 043022P Hormones and biochemistry of tissues 2 ECTS
- 043023P Seminars and exercises of Medical biochemistry and Molecular Biology 2 ECTS
- 043024P Practical laboratory working in Medical Biochemistry and Molecular Biology 2 ECTS
- 043025P Final exam of Medical Biochemistry and Molecular Biology 2 ECTS

Recommended or required reading:

Rodwell, Bender, Botham, Kennelly, Weil (eds.): Harper's Illustrated Biochemistry, 31st edition, 2018.

Assessment methods and criteria:

Exam

Grading:

The exam will be graded 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

-

043021P: Medical Biochemistry and Molecular Biology: Basics of the metabolism, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karppinen, Peppi Leena Elina, Joni Mäki

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

3 ECTS credits / 81 hours of work.

Language of instruction:

Finnish

Timing:

1st spring semester.

Learning outcomes:

Upon completion of the course, the student will be able to:

- identify and name fundamental molecules in metabolism (carbohydrates, lipids, amino acids, nucleotides) and understand their relationships to the medicine
- name the most fundamental metabolic pathways and their metabolites, and understand the common regulation of the various metabolic pathways
- interpret the changes in metabolism of the diseases or other conditions

-

Contents:

Metabolism and catabolism of the carbohydrates, lipids, amino acids and nucleotides, and the integration of whole metabolism; biological oxidations and energy metabolism; cholesterol and lipoproteins.

Mode of delivery:

Lectures, exam.

Learning activities and teaching methods:

33 hours of lectures, 3 hours exam and 45 hours independent work.

Target group:

Major students.

Prerequisites and co-requisites:

The recommended prerequisite is the completion of the following course:

-043020P Basics of the Molecular Biology 2 ECTS

Recommended optional programme components:

These courses are recommended to be completed in same spring semester:

-043020P Basics of the Molecular Biology 2 ECTS

-043022P Hormones and biochemistry of tissues 2 ECTS

-043023P Seminars and exercises of Medical Biochemistry and Molecular Biology 2 ECTS

-043024P Practical laboratory working in Medical Biochemistry and Molecular Biology 2 ECTS

-043025P Final exam of Medical Biochemistry and Molecular Biology 2 ECTS

Recommended or required reading:

Rodwell, Bender, Botham, Kennelly, Weil (eds.): Harper's Illustrated Biochemistry, 31st edition, 2018

Assessment methods and criteria:

Lectures, exam.

Grading:

The exam will be graded 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

-

043022P: Medical Biochemistry and Molecular Biology: Hormones and biochemistry of tissues, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karppinen, Peppi Leena Elina, Joni Mäki

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS credits / 54 hours of work.

Language of instruction:

Finnish

Timing:

1st Spring semester.

Learning outcomes:

Upon completion of the course, the student will be able to:

- classify and name the main hormones
- explain most common effects of the hormones on their target cells and tissues
- interpret the effects of abnormal hormonal regulation
- name the basic components of the extracellular matrix and connective tissue, and identify their specific functions in organs and medical relevance
- understand the general systemic roles of blood, its composition and clotting
- understand the role of hypoxia regulation in tissues, and its applications in medicine

Contents:

Classification, function and regulation of the hormones; eicosanoids; biochemistry of connective tissue; composition and properties of the blood; porphyrins and bile pigments.

Mode of delivery:

Lectures, exam.

Learning activities and teaching methods:

Lectures 36 hours, 3 hours exam and 15 hours independent work.

Target group:

Major students.

Prerequisites and co-requisites:

-

Recommended optional programme components:

The recommended prerequisite is the completion of the following course:

- 043020P Basics of the Molecular Biology 2 ECTS
- 043021P Basics of the metabolism 3 ECTS

Recommended or required reading:

Rodwell, Bender, Botham, Kennelly, Weil (eds.): Harper's Illustrated Biochemistry, 31st edition, 2018

Assessment methods and criteria:

Lectures, exam.

Grading:

The exam will be graded 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

-

043023P: Seminars and exercises of Medical Biochemistry and Molecular Biology, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Joni Mäki, Karppinen, Peppi Leena Elina

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS credits / 54 hours of work.

Language of instruction:

Finnish

Timing:

1st Spring semester.

Learning outcomes:

Upon completion of the course, the student will be able to:

- popularize scientific and medicine related data that is connected to the medical biochemistry and molecular biology
- give oral presentations and act as an opponent
- ask relevant questions concerning the presentations and his/her own knowledge about the biochemistry
- explain and analyze biochemical relationships in pathological conditions and nutritional cases
- learn general knowledge about different topics in medicine besides of their association to the biochemistry
- know generally what causes the diabetes and how it is related to metabolism
- solve selected exercises based on anamnesis, status and laboratory tests

Contents:

Themes can vary annually.

Mode of delivery:

Lectures (themeday), seminars, remote exercises.

Learning activities and teaching methods:

Lectures 8 t, seminars with panelists 3 t, remote exercises and independent work by student 43 hours.

Target group:

Major students.

Prerequisites and co-requisites:

Recommended courses during the same Spring:

- 043020P Basics of the Molecular Biology 2 ECTS
- 043021P Basics of the metabolism 3 ECTS
- 043022P Hormones and biochemistry of tissues 2 ECTS
- 043024P Practical laboratory working in Medical Biochemistry and Molecular Biology 2 ECTS

Recommended optional programme components:

Recommended courses during the same Spring:

- 043020P Basics of the Molecular Biology 2 ECTS
- 043021P Basics of the metabolism 3 ECTS
- 043022P Hormones and biochemistry of tissues 2 ECTS
- 043024P Practical laboratory working in Medical Biochemistry and Molecular Biology 2 ECTS

Recommended or required reading:

-

Assessment methods and criteria:

Obligator presence in lectures and in seminars, returned assignments.

Grading:

Passed/Fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

-

043024P: Practical laboratory working in Medical Biochemistry and Molecular Biology, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Faculty of Biochemistry and Molecular Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karppinen, Peppi Leena Elina, Joni Mäki

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS credits / 54 hours of work

Language of instruction:

Finnish

Timing:

1st Spring semester.

Learning outcomes:

Upon completion of the course, the student will be able to:

-recognize the central DNA- and protein related techniques used currently in medicine, and understand their central applications and has practical experience on their implementation

- work in laboratory

-recognize the sources of errors in diagnostic laboratory techniques

Contents:

Cloning of DNA-fragments; The expression of recombinant proteins in bacterial cells; Diagnostics of AGU-disease with PCR; Kinetics of enzymatic reactions.

Mode of delivery:

Laboratory course.

Learning activities and teaching methods:

Practical working in laboratory, preparing casebook and oral exam 54 hours.

Target group:

Major students.

Prerequisites and co-requisites:

The recommended prerequisite is the completion of the following course:

-043020P Basics of the Molecular Biology 2 ECTS

Recommended optional programme components:

These courses are recommended to be completed in same spring semester:

-043020P Basics of the Molecular Biology 2 ECTS

Recommended or required reading:

Laboratory handout.

Assessment methods and criteria:

Attendance at laboratory is compulsory. Pass/Fail.

Grading:

Pass/Fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

Attendance at laboratory is compulsory.

043025P: Final exam of Medical Biochemistry and Molecular Medicine, 2 op**Voimassaolo:** 01.08.2016 -**Opiskelumuoto:** Basic Studies**Laji:** Course**Vastuuyksikkö:** Faculty of Biochemistry and Molecular Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Joni Mäki, Karppinen, Peppi Leena Elina**Opintokohteen kielet:** Finnish**Proficiency level:**

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS credits / 54 hours of work.

Language of instruction:

Finnish

Timing:

1st Spring semester.

Learning outcomes:Upon completion of the course, the student will be able to:

- explain genes structure, function and regulation both in normal physiology and diseases
- know what proteins are, how they are produced and what are their functions
- understand the nature of the mutations in genes, both in DNA and protein level
- recognize the central DNA-related techniques used currently in medicine, and understand their central applications
- recognize the sources of errors in diagnostic laboratory techniques
- know how to classify the enzymes and understand their functions in cellular systems, and understand principles of their use in diagnostics
- identify and name fundamental molecules in metabolism (carbohydrates, lipids, amino acids, nucleotides) and understand their relationships to the medicine
- name the most fundamental metabolic pathways and their metabolites, and understand the common regulation of the various metabolic pathways
- interpret the changes in metabolism of the diseases or other conditions
- classify and name the main hormones
- explain most common effects of the hormones on their target cells and tissues
- interpret the effects of abnormal hormonal regulation
- name the basic components of the extracellular matrix and connective tissue, and identify their specific functions in organs and medical relevance
- understand the general systemic roles of blood, its composition and clotting
- understand the role of hypoxia regulation in tissues, and its applications in medicine

Contents:

The basic concepts of medical biochemistry and molecular biology:

The structure, function and regulation of the genes; genetic code, mutations in genes and their effects on gene functions; DNA repairing mechanisms; proto-oncogenes, oncogenes, tumour suppressors, growth factors and cytokines; basics of DNA technology; properties of proteins and protein synthesis; classification and function of the enzymes; hypoxia response of the cells; metabolism and catabolism of the carbohydrates, lipids, amino acids and nucleotides, and the integration of whole metabolism; biological oxidations and energy metabolism; cholesterol and lipoproteins; classification, function and regulation of the hormones; eicosanoids; biochemistry of connective tissue; composition and properties of the blood; porphyrins and bile pigments.

Mode of delivery:

Final exam.

Learning activities and teaching methods:

Independent work 49 h ja 5 h exam.

Target group:

Major students.

Prerequisites and co-requisites:

Courses that has to be passed prior to participation final exam:

-043020P Basics of the Molecular Biology 2 ECTS

-043021P Basics of the metabolism 3 ECTS

-043022P Hormones and biochemistry of tissues 2 ECTS

Recommended optional programme components:

Recommended courses prior participating the final exam:

-043024P Practical laboratory working in Medical Biochemistry and Molecular Biology 2 ECTS

-043023P Seminars and excercises of Medical Biochemistry and Molecular Biology 2 ECTS

Recommended or required reading:

Lectures and book:

Rodwell, Bender, Botham, Kennelly, Weil (eds.): Harper's Illustrated Biochemistry, 31st edition, 2018

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Assessment methods and criteria:

Medical biochemistry and molecular biology course includes 3 different intermediate exams which will be graded 1-5 (4 questions). Final exam consist of 5 essays, and will be graded 1-5. All the intermediate exams should be passed before participation in final exam.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Peppi Karppinen, substitute Joni Mäki.

Working life cooperation:

-

Other information:

-

A540144: Microbiology and immunology, 10 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Basic Studies

Laji: Study module

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Timo Hautala

Opintokohteen kielet: Finnish

ECTS Credits:

10 ECTS credits / 270 hours of work

Language of instruction:

Finnish, some lectures given in English

Timing:

The course starts autumn period continuing to spring. Second year, C3 and C4.

Learning outcomes:

Upon completion of the study module, the student will be able to explain the basic structure, function and regulation of immune defense systems in humans. The student masters the ways that immune defense system can discriminate the foreign and self structures, how are the different defense responses generated and regulated; what is immune tolerance and how is the immunological memory formed. The student masters also the clinical outcomes of malfunctional immune system.

During the study module the student gets familiar with the essential pathogens and knows their most important properties, can associate the common diseases with the pathogens, and knows the basics of antimicrobial treatment and the prevention of the diseases. The student also masters the suitable diagnostic methods and their limitations in the detection of the pathogens.

In this study module, the student will gain skills of working as a member of expert group. The group work strengthens the student in scientific communication and teaches to carry responsibility of collaboratively produced knowledge. The student will learn skills to give feedback to peers and appreciate the feedback obtained in the group work.

Contents:

Immunology:

Innate immunity, antigen capture and presentation to lymphocytes, antigen recognition in the adaptive immune system, T-cell mediated immunity, effector mechanisms of T-cell mediated immunity, humoral immune responses, effector functions of humoral immunity, immunological tolerance and autoimmunity, immune responses to tumors and transplants, hypersensitivity

Microbiology:

introduction to bacteriology and virology, microbiological samples and obtaining the samples, basic diagnostics in microbiology, the most important bacteria and viruses in respiratory infections, the infections of alimentary canal, urinary tract and sexually transmitted infections, skin infections, zoonotic infections, sepsis and difficult infections, infections in primary health care, resistance to antimicrobial agents, anaerobic bacteria, mechanisms of pathogenesis in infectious diseases, impact of infectious diseases in society and the infectious disease epidemiology.

Mode of delivery:

Mainly face-to-face teaching. Collaborative learning objectives are issued via e-learning platform.

Learning activities and teaching methods:

Immunology:

14h lectures
30h self-study for group work
15h group work
2h immunology examination
47h independent work

Microbiology:

14h lectures
30h self-study for group work
12h group work
3h laboratory practice
2h preparing the presentation
2h microbiology examination
99h independent work

Target group:

Medicine and dentistry students

Prerequisites and co-requisites:

No prerequisites.

Recommended optional programme components:

The course has to be completed during the first two years of medical and dental studies.

Recommended or required reading:

Abbas, Lichtman & Pillai: Basic Immunology: 5th ed.

Murray et al. Medical Microbiology, 8th ed.

Lecture and group work material

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course. This course utilizes shared expertise and collaborative learning methods. Attendance, preparation and participation in the group work is mandatory for the completion of the study module. The student will get feedback from the peers about the expert role in discussions. The immunology and microbiology parts are evaluated separately and both parts have to be passed. Passed examination is more than 60% of the total points.

The student has a possibility to complete the immunology examination in the mid-course after the immunology entity or in combination with the microbiology examination at the end of the course.

Grading:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

The group-work is evaluated by pass/fail scale

Person responsible:

Professor of medical microbiology and immunology Timo Hautala

Working life cooperation:

Clinical introductory lectures are given by the lecturers from the local primary health care units, hospitals and diagnostic companies.

Compulsory

043040P: Immunology, 4 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Timo Hautala, Antti Nissinen

Opintokohteen kielet: Finnish

ECTS Credits:

4 ECTS credits / 108 hours of work

Language of instruction:

Finnish, some lectures given in English

Timing:

The course starts autumn period continuing to spring. Second year, C3 and C4

Learning outcomes:

Upon completion of the study module, the student will be able to explain the basic structure, function and regulation of immune defense systems in humans. The student masters the ways that immune defense system can discriminate the foreign and self structures, how are the different defense responses generated and regulated; what is immune tolerance and how is the immunological memory formed. The student masters also the clinical outcomes of malfunctional immune system.

During the study module the student gets familiar with the essential pathogens and knows their most important properties, can associate the common diseases with the pathogens, and knows the basics of antimicrobial treatment and the prevention of the diseases. The student also masters the suitable diagnostic methods and their limitations in the detection of the pathogens.

In this study module, the student will gain skills of working as a member of expert group. The group work strengthens the student in scientific communication and teaches to carry responsibility of collaboratively produced knowledge. The student will learn skills to give feedback to peers and appreciate the feedback obtained in the group work.

Contents:

Immunology:

Innate immunity, antigen capture and presentation to lymphocytes, antigen recognition in the adaptive immune system, T-cell mediated immunity, effector mechanisms of T-cell mediated immunity, humoral immune responses, effector functions of humoral immunity, immunological tolerance and autoimmunity, immune responses to tumors and transplants, hypersensitivity

Mode of delivery:

Mainly face-to-face teaching. Collaborative learning objectives are issued via e-learning platform.

Learning activities and teaching methods:

Immunology:

14h lectures

30h self-study for group work

15h group work

2h immunology examination

47h independent work

Target group:

Medicine and dentistry students

Prerequisites and co-requisites:

No prerequisites.

Recommended optional programme components:

The course has to be completed during the first two years of medical and dental studies.

Recommended or required reading:

Abbas, Lichtman & Pillai: Basic Immunology: 5th ed.
Lecture and group work material

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course. This course utilizes shared expertise and collaborative learning methods. Attendance, preparation and participation in the group work is mandatory for the completion of the study module. The student will get feedback from the peers about the expert role in discussions.

The immunology and microbiology parts are evaluated separately and both parts have to be passed.

Passed examination is more than 60% of the total points.

The student has a possibility to complete the immunology examination in the mid-course after the immunology entity or in combination with the microbiology examination at the end of the course.

Grading:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

The group-work is evaluated by pass/fail scale

Person responsible:

Professor of medical microbiology and immunology Timo Hautala

Working life cooperation:

Experts from the local primary health care units, hospitals and diagnostic companies give some of the clinical introductory lectures.

043041P: Microbiology, 6 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Antti Nissinen, Timo Hautala

Opintokohteen kielet: Finnish

ECTS Credits:

6 ECTS credits / 162 hours of work

Language of instruction:

Finnish, some lectures given in English

Timing:

The course will be held spring-semester. Second year, C4.

Learning outcomes:

During the study module the student focuses on the pathogens that are important in the Finnish health care system. Student knows the properties, the diseases, the antimicrobial treatment and the prevention of the essential pathogens. The student also masters the suitable diagnostic methods and their limitations in the detection of the pathogens.

The student will gain skills of working as a member of expert group by group-work in this study module.

The group work also guides the student in scientific communication and carrying the responsibility of building collaborative knowledge. The student will learn skills to give feedback to peers and appreciate the feedback obtained in the group work.

Contents:

Microbiology:

introduction to bacteriology and virology, microbiological samples and obtaining the samples, basic diagnostics in microbiology, the most important bacteria and viruses in respiratory infections, the infections of alimentary canal, urinary tract and sexually transmitted infections, skin infections, zoonotic infections, sepsis and difficult infections, infections in primary health care, resistance to antimicrobial agents, anaerobic bacteria, mechanisms of pathogenesis in infectious diseases, impact of infectious diseases in society and the infectious disease epidemiology.

Mode of delivery:

Mainly face-to-face teaching. Collaborative learning objectives are issued via e-learning platform.

Learning activities and teaching methods:**Microbiology:**

14h lectures

30h self-study for group work

12h group work

3h laboratory practice

2h preparing the presentation

2h microbiology examination

99h independent work

Target group:

Medicine and dentistry students

Prerequisites and co-requisites:

No prerequisites.

Recommended optional programme components:

The course has to be completed during the first two years of medical and dental studies.

Recommended or required reading:

Murray et al. Medical Microbiology, 8th ed.

Lecture and group work material

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course. This course utilizes shared expertise and collaborative learning methods. Attendance, preparation and participation in the group work is mandatory for the completion of the study module. The student will get feedback from the peers about the expert role in discussions.

The immunology and microbiology parts are evaluated separately and both parts have to be passed.

Passed examination is more than 60% of the total points.

The student has a possibility to complete the immunology examination in the mid-course after the immunology entity or in combination with the microbiology examination at the end of the course.

Grading:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

The group-work is evaluated by pass/fail scale.

Person responsible:

Professor of medical microbiology and immunology Timo Hautala

Working life cooperation:

Experts from the local primary health care units, hospitals and diagnostic companies give some of the clinical introductory lectures.

A540145: Pharmacology and toxicology, 10 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Basic Studies

Laji: Study module

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Risto Kerkelä

Opintokohteen kielet: Finnish

ECTS Credits:

10 ECTS credits/ 270 hours of work.

Language of instruction:

Finnish

Timing:

The course is held during the spring semester in the second study year (C4 / DC4).

Learning outcomes:

After passing the courses, the student has ability to carry out safe and efficient drug therapy. Upon completion of the courses, the student:

- is able to explain pharmacokinetics of a specific drug after administration
- is able to explain physiologic effects of drugs and their mechanisms of action
- is familiar with major drug classes and their role in the treatment of diseases.
- understands the basis of individualized drug therapy.
- understands the basics of toxicology

In addition, the student will learn team working skills and presentation skills.

Contents:

043045P Pharmacology and toxicology PART I 4 ECTS:

The basic terminology of pharmacology: pharmacodynamics and pharmacokinetics. Systematic review of major classes of drugs: drugs affecting cardiovascular system, anti-diabetic medications, drugs affecting the respiratory tract, antimicrobial agents.

043046P Pharmacology and toxicology PART II 5 ECTS:

Systematic review of major classes of drugs: drugs affecting gastrointestinal drugs, drug treatment of pain, psychiatric medications, neurological drugs. Toxicology: the basics of toxicology, the most common poisonings and fundamentals of toxicological risk assessment.

043047P Pharmacology and toxicology PART III 1 ECTS:

Systematic review of major classes of drugs and basics of toxicology.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

043045P Pharmacology and toxicology PART I 4 ECTS:

Lectures 34h / tutorials 6-8h / Self-study 66-68h. The tutorials are completed as small group work.

043046P Pharmacology and toxicology PART II 5 ECTS:

Lectures 40h / tutorials 10-12h / Self-study 83-85h. The tutorials are completed as small group work.

043047P Pharmacology and toxicology PART III 1 ECTS:

Exam 4 h, self-study 27 h

Target group:

Medical and dental students. Also other students can be admitted to the course.

Recommended or required reading:

Recommended or required reading: Ruskoaho H., Hakkola J., et al: Lääketieteellinen farmakologia ja toksikologia (Kustannus Oy Duodecim, latest edition, 2019). The electronic version of the book can be found in "oppiportti" and in "Duodecim lääketietokanta". Other textbooks that can be used are "Farmakologia ja Toksikologia" edited by Markku Koulu and Eero Mervaala (10th ed. 2018) or Rang, Ritter, Flower, Henderson: Rang & Dale's Pharmacology, Churchill Livingstone (latest edition). In addition, Duodecim and Suomen lääkirilehti publish articles of current advances in drug therapy.

Assessment methods and criteria:

043045P Pharmacology and toxicology PART I 4 ECTS:

Lectures. Active participation in tutorials that are mandatory. At the beginning of the course students study independently for an exam evaluating the required level of knowledge of basic pharmacokinetics and pharmacodynamics. In addition, an exam is given for the entire contents of the course. The exam is graded on a pass /fail basis.

043046P Pharmacology and toxicology PART II 5 ECTS:

Lectures. Active participation in tutorials that are mandatory. At the beginning of the course students study independently for an exam evaluating the required level of knowledge of basic pharmacokinetics and pharmacodynamics. In addition, an exam is given. The exam is graded on a pass/fail basis.

043047P Pharmacology and toxicology PART III 1 ECTS:

The course includes an exam. Two failed answers in final exam result in failing of the exam.

Grading:

043045P: Pharmacology and toxicology:

Two exams with the grading scale pass/fail.

043046P Pharmacology and toxicology PART II:

Exam with the grading scale pass/fail.

043047P Pharmacology and toxicology PART III:

Exam. Two failed answers in final exam result in failing of the exam. The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Risto Kerkelä

Working life cooperation:

The course includes guest lectures from specialists from Oulu University Hospital.

Compulsory

043045P: Pharmacology and toxicology PART I, 4 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Risto Kerkelä, Johanna Magga

Opintokohteen kielet: Finnish

ECTS Credits:

4 ECTS credits/ 108 hours of work.

Language of instruction:

Finnish

Timing:

The course is held during the spring semester in the second study year (C4 / DC4).

Learning outcomes:

After passing the course, the student has ability to carry out safe and efficient drug therapy. Upon completion of the course, the student:

- is able to explain pharmacokinetics of a specific drug after administration
- is able to explain physiologic effects of drugs and their mechanisms of action
- is familiar with major drug classes and their role in the treatment of diseases.

In addition, the student will learn team working skills and presentation skills.

Contents:

The basic terminology of pharmacology: pharmacodynamics and pharmacokinetics. Systematic review of major classes of drugs: drugs affecting cardiovascular system, anti-diabetic medications, drugs affecting the respiratory tract, antimicrobial agents.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 34h / tutorials 6-8h / Self-study 66-68h. The tutorials are completed as small group work.

Target group:

Medical and dental students. Also other students can be admitted to the course.

Recommended or required reading:

Recommended or required reading: Ruskoaho H., Hakkola J., et al: Lääketieteellinen farmakologia ja toksikologia (Kustannus Oy Duodecim, latest edition, 2019). The electronic version of the book can be found in "oppiportti" and in "Duodecim lääketietokanta". Other textbooks that can be used are "Farmakologia ja Toksikologia" edited by Markku Koulu and Eero Mervaala (10th ed. 2018) or Rang, Ritter, Flower, Henderson: Rang & Dale's Pharmacology, Churchill Livingstone (latest edition). In addition, Duodecim and Suomen lääkärilehti publish articles of current advances in drug therapy.

Assessment methods and criteria:

Lectures. Active participation in tutorials that are mandatory. At the beginning of the course students study independently for an exam evaluating the required level of knowledge of basic pharmacokinetics and pharmacodynamics. In addition, an exam is given. The exam is graded on a pass/fail basis.

Grading:

The grading scale for the course is pass/fail.

Person responsible:

Professor Risto Kerkelä

Working life cooperation:

No

043046P: Pharmacology and toxicology PART II, 5 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Risto Kerkelä

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS credits / 135 hours of work

Language of instruction:

Finnish

Timing:

The course is held during the spring semester in the second study year (C4 / DC4).

Learning outcomes:

After passing the course, the student has ability to carry out safe and efficient drug therapy. Upon completion of the course, the student:

- is able to explain pharmacokinetics of a specific drug after administration
- is able to explain physiologic effects of drugs and their mechanisms of action
- is familiar with major drug classes and their role in the treatment of diseases.
- understands the basis of individualized drug therapy.
- understands the basics of toxicology

In addition, the student will learn team working skills and presentation skills.

Contents:

Systematic review of major classes of drugs: drugs affecting gastrointestinal drugs, drug treatment of pain, psychiatric medications, neurological drugs.

Toxicology: the basics of toxicology, the most common poisonings and fundamentals of toxicological risk assessment.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 40h / tutorials 10-12h / Self-study 83-85h. The tutorials are completed as small group work.

Target group:

Medical and dental students. Also other students can be admitted to the course.

Recommended or required reading:

Recommended or required reading: Ruskoaho H., Hakkola J., et al: Lääketieteellinen farmakologia ja toksikologia (Kustannus Oy Duodecim, latest edition, 2019). The electronic version of the book can be found in "oppiportti" and in "Duodecim lääketietokanta". Other textbooks that can be used are "Farmakologia ja Toksikologia" edited by Markku Koulu and Eero Mervaala (10th ed. 2018) or Rang, Ritter, Flower, Henderson: Rang & Dale's Pharmacology, Churchill Livingstone (latest edition). In addition, Duodecim and Suomen lääkärilehti publish articles of current advances in drug therapy.

Assessment methods and criteria:

Lectures. Active participation in tutorials that are mandatory. At the beginning of the course students study independently for an exam evaluating the required level of knowledge of basic pharmacokinetics and pharmacodynamics. In addition, an exam is given. The exam is graded on a pass/fail basis.

Grading:

The grading scale for the course is pass/fail.

Person responsible:

Professor Risto Kerkelä

Working life cooperation:

The course includes guest lectures from specialists from Oulu University Hospital.

043047P: Pharmacology and toxicology PART III, 1 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Risto Kerkelä

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS credit / 27 hours of work

Language of instruction:

Finnish

Timing:

The course is held during the spring semester in the second study year (C4 / DC4).

Learning outcomes:

After passing the course, the student has ability to carry out safe and efficient drug therapy. Upon completion of the course, the student:

- is able to explain pharmacokinetics of a specific drug after administration
- is able to explain physiologic effects of drugs and their mechanisms of action
- is familiar with major drug classes and their role in the treatment of diseases.
- understands the basis of individualized drug therapy.
- understands the basics of toxicology

Contents:

Systematic review of major classes of drugs and basics of toxicology.

Mode of delivery:

Self-study, exam.

Learning activities and teaching methods:

Self-study 19 h, exam 4 h.

Target group:

Medical and dental students. Also other students can be admitted to the course.

Prerequisites and co-requisites:

The required prerequisite is the completion of the following courses prior to enrolling for the course: 043045P Pharmacology and toxicology, part 1 and 043046P Pharmacology and toxicology, part 2.

Recommended or required reading:

Recommended or required reading: Ruskoaho H., Hakkola J., et al: Lääketieteellinen farmakologia ja toksikologia (Kustannus Oy Duodecim, latest edition, 2019). The electronic version of the book can be found in "oppiportti" and in "Duodecim lääketietokanta". Other textbooks that can be used are "Farmakologia ja Toksikologia" edited by Markku Koulu and Eero Mervaala (10th ed. 2018) or Rang, Ritter, Flower, Henderson: Rang & Dale's Pharmacology, Churchill Livingstone (latest edition). In addition, Duodecim and Suomen lääkärilehti publish articles of current advances in drug therapy

Assessment methods and criteria:

The course includes an exam. Two failed answers in final exam result in failing of the exam.

Grading:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Risto Kerkelä

A540143: Physiology, 15 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Basic Studies

Laji: Study module

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Kari Mäkelä, Karl-Heinz Herzig

Opintokohteen kielet: Finnish

ECTS Credits:

15 ECTS credits / 405 hours of work.

Language of instruction:

Finnish and English.

Timing:

The course unit is held in the autumn semester. The course must be completed during the first two years of the Medical School curriculum.

Learning outcomes:

After completion of the course the student:

- knows the principles of the function, regulation, and interrelations of the cells, tissues and organ systems of the healthy human being, as required for independent work as a physician or dentist
- is able to evaluate the knowledge and apply it to clinical problems as basis of diseases (pathophysiology)
- is able to follow and evaluate the development of medical physiology as a science, and maintain and improve knowledge in it both in Finnish and English
- is able to apply knowledge in physiology for acquiring, evaluating and reporting scientific medical and dental information

After reaching the learning aims the student has sufficient knowledge and skills in physiology for studies leading to the degrees of Licentiate of Medicine and Licentiate of Dentistry, and for continuous learning.

Contents:

Includes courses 043030P Physiology, term paper 2 credits, 043031P Physiology interim exam 5 credits, 043032P Physiology group works 2 credits and 043033P Physiology final examination 6 credits covering:

1. Cell physiology
2. Fundamentals of biophysics
3. Physiological functions of the body
4. Clinical chemistry
5. Physiological regulation and integrative physiology
6. Applied physiology

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Guidance and tutorial, lectures, practicals, term paper, interim and final examinations, independent study.

Target group:

Second year medical and dental students.

Prerequisites and co-requisites:

The student should have completed the courses of Anatomy and Medical Cell and Developmental Biology (A540141), and Medical Biochemistry and Molecular Biology (A540142).

Recommended or required reading:

- Ganong's Review of Medical Physiology (25th Edition).
- Medical Physiology (Boron W.F., 3rd edition)
- Practicals Textbook
- Lecture notes can be found in the Moodle system.

Assessment methods and criteria:

At the beginning of the course there is an examination on the subject of the practicals, which has to be passed. In the middle of the course there is an interim examination on the course contents 1 to 4, and at the end the final examination. The student has to obtain one third of the maximum points to pass these examinations. In addition, in the final examination only one answer (essay) may be under the pass limit (one third of the maximum points) though not zero.

Grading:

Graded 1-5 or fail.

Person responsible:

Professor Karl-Heinz Herzig

Working life cooperation:

No

Compulsory

043030P: Physiology, term paper, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Kari Mäkelä, Karl-Heinz Herzig

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits /54 hours of work

Language of instruction:

Finnish and English.

Timing:

Autumn semester. The term paper must be written during the first two years of the Medical School curriculum.

Learning outcomes:

After completion of the course the student:

- can better find and combine fundamental scientific and clinical knowledge and skills
- can evaluate critically new knowledge according to the EBM principles, and apply it in clinical work
- can apply medical research in diagnosing diseases
- can follow and evaluate medical knowledge, and maintain and develop the knowledge both in Finnish and English
- can apply knowledge in physiology for acquiring, evaluating and reporting scientific medical information
- can better serve as an authority in the medical field
- can better communicate medical knowledge both to professionals and laymen

Contents:

1. Term paper subject (8-9 titles)
2. Tutorial session for all students
3. Obtaining and perusing the literature

4. Writing and submitting (via Urkund) the term paper
5. Individual feedback briefing session in each of the groups (obligatory)

Mode of delivery:

Face-to-face teaching and independent study

Learning activities and teaching methods:

Guidance and tutoring (1 h), writing and submitting the term paper (52 h), feedback session (1 h, obligatory).

Target group:

Second year medical and dental students.

Prerequisites and co-requisites:

The student should have completed the courses of Anatomy and Medical Cell and Developmental Biology (A540141), and Medical Biochemistry and Molecular Biology (A540142).

Recommended or required reading:

Literature search according to the subject matter. International peer-reviewed medical/dental literature (original publications and reviews).

Assessment methods and criteria:

Familiarizing with the subject matter and writing the term paper. Detailed instructions can be found during the course period in the Moodle system.

Grading:

Graded 1-5 or fail.

Person responsible:

Professor Karl-Heinz Herzig

Working life cooperation:

No

043031P: Physiology interim exam, 5 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karl-Heinz Herzig, Kari Mäkelä

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS credits /135 hours of work

Language of instruction:

Finnish and English.

Timing:

The course unit is held in the autumn semester. The course must be completed during the first two years of the Medical School curriculum

Learning outcomes:

After completion of the course the student:

- knows the basic principles of the function, regulation, and interrelations of the cells, tissues and organ systems of the healthy human being, as required for independent work as a physician or dentist
- is able to critically evaluate the knowledge and apply it for investigations of clinical physiological problems as basis of diseases (pathophysiology)
- is able to follow and evaluate the development of medical physiology as a science, and independently maintain and improve knowledge in it both in Finnish and English
- is able to creatively apply knowledge in basic physiology for acquiring, evaluating and reporting scientific medical and dental information

After reaching the learning aims the student has sufficient knowledge, skills and ability of basic physiology to apply them in further studies leading to the degrees of Licentiate of Medicine and Licentiate of Dentistry, and for continuous learning.

Contents:

1. Cell physiology
2. Fundamentals of biophysics
3. Physiological maintenance functions of the body
4. Clinical chemistry

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures (58 h), independent study (75 h), exam (2 h).

Target group:

Second year medical and dental students.

Prerequisites and co-requisites:

The student should have completed the courses of Anatomy and Medical Cell and Developmental Biology (A540141), and Medical Biochemistry and Molecular Biology (A540142).

Recommended or required reading:

- Ganong's Review of Medical Physiology (25th Edition).
- Medical Physiology (Boron W.F., 3rd edition)
- Practicals Textbook
- Lecture notes can be found in the Moodle system.

Assessment methods and criteria:

Written examination. The student has to obtain one third of the maximum points to pass. Detailed requirements can be found in the Moodle system (<https://moodle oulu.fi>).

Grading:

Graded 1-5 or fail.

Person responsible:

Professor Karl-Heinz Herzig

Working life cooperation:

No

043032P: Physiology group works, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Kari Mäkelä, Karl-Heinz Herzig

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits /54 hours of work

Language of instruction:

Finnish and English.

Timing:

Autumn semester. The term paper must be written during the first two years of the Medical School curriculum.

Learning outcomes:

After completion of the course the student:

- can better find and combine fundamental scientific and clinical knowledge and skills
- can function as member of a team when performing medical procedures
- can make diagnostic decisions as a member of a team
- can apply medical knowledge to medical skills and procedures
- can better make diagnostic decisions based on firsthand empirical evidence
- can better apply differential diagnostics thinking in medical work
- can better handle errors in medical workup and learn from them

Contents:

1. Entry examination on the Physiology Practicals workbook (obligatory)
2. Eight practicals in clinically applied physiology (obligatory)
3. Two group sessions on medical biophysics (obligatory)

Mode of delivery:

Face-to-face teaching and independent study

Learning activities and teaching methods:

Entry examination (1 h), practicals and group sessions (36 h), independent study (17 h).

Target group:

Second year medical and dental students.

Prerequisites and co-requisites:

The student should have completed the courses of Anatomy and Medical Cell and Developmental Biology (A540141), and Medical Biochemistry and Molecular Biology (A540142).

Recommended or required reading:

- Physiology practicals workbook (in Finnish)
- Ganong's Review of Medical Physiology (25th Edition).
- Medical Physiology (Boron W.F., 3rd edition)

Assessment methods and criteria:

Entry examination (multiple choice, pass/fail). Active participation in the practicals and the group sessions (obligatory). Detailed instructions can be found in the Moodle system.

Grading:

Pass/fail.

Person responsible:

Professor Karl-Heinz Herzig

Working life cooperation:

No

043033P: Physiology final examination, 6 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Karl-Heinz Herzig, Kari Mäkelä

Opintokohteen kielet: Finnish

ECTS Credits:

6 ECTS credits / 162 hours of work.

Language of instruction:

Finnish and English.

Timing:

The course unit is held in the autumn semester. The course must be completed during the first two years of the Medical School curriculum

Learning outcomes:

After completion of the course the student:

- knows the principles of the function, regulation, and interrelations of the cells, tissues and organ systems of the healthy human being, as required for independent work as a physician or dentist
- is able to evaluate the knowledge and apply it for investigations of clinical physiological problems and mechanisms of diseases
- is able to follow and evaluate the development of medical physiology as a science, and maintain and improve knowledge in it both in Finnish and English
- is able to apply knowledge in physiology for acquiring, evaluating and reporting scientific medical and dental information

After reaching the learning aims the student has sufficient knowledge and skills in physiology for studies leading to the degrees of Licentiate of Medicine and Licentiate of Dentistry, and for continuous learning.

Contents:

1. Cell physiology
2. Fundamentals of biophysics
3. Physiological functions of the body
4. Clinical chemistry
5. Physiological regulation and integrative physiology
6. Applied physiology

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures (52 h), independent study (104 h), guidance and tutoring (2h), exam (4 h).

Target group:

Second year medical and dental students.

Prerequisites and co-requisites:

The student should have completed the courses of Anatomy and Medical Cell and Developmental Biology (A540141), and Medical Biochemistry and Molecular Biology (A540142).

Recommended or required reading:

- Ganong's Review of Medical Physiology (25th Edition).
- Medical Physiology (Boron W.F., 3rd edition)
- Lecture notes can be found in the Moodle system.

Assessment methods and criteria:

Final examination can be done when the physiology term paper, interim exam, group works and exam on the subjects of practical has been passed.

The student has to obtain one third of the maximum points to pass final examination.

In addition, a maximum of one answer (essay) may be under the pass limit (one third of the maximum points) though not zero. Detailed requirements can be found in the Moodle system (<https://moodle oulu.fi>).

Grading:

Graded 1-5 or fail.

Person responsible:

Professor Karl-Heinz Herzig

Working life cooperation:

No

043027P: Psychology for Medical Students, 4 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Tuula Hurtig

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

4 ECTS credits/106 hours of work

Language of instruction:

Finnish

Timing:

The course is held in spring semester, during periods III and IV

Learning outcomes:

A student

- learns to see a human and human development in lifespan
- finds ways to observe and to influence on patients and their behaviour using psychological knowledge.

Furthermore, an objective is to help future medical doctors and dentists to observe their influence on the behavior of patients, and to the health care system. Finally, a goal is to develop interactional skills of future doctors and to promote their wellbeing as students and doctors.

Contents:

Human psychological development from the perspective of developmental psychology, human behaviour from the perspective of social psychology, and motivation in health behaviour from the perspective of health psychology.

Mode of delivery:

The tuition will be implemented as contact teaching.

Learning activities and teaching methods:

Lectures 25 hours, exam in Moodle, group teaching 10 hours, group work 10 hours, individual work 56 hours, web-based group discussion 5 hours.

Target group:

The course is compulsory for 1st year students of medicine and dentistry.

Prerequisites and co-requisites:

-

Recommended optional programme components:

Part of the course is integrated with English Module III.

Recommended or required reading:

Contents of the lectures, pre-course material in Moodle.

Assessment methods and criteria:

Exam in Moodle, individual scientific essay, discussion in Moodle.

Grading:

The course utilizes verbal grading scale Pass+, Pass, Fail.

Person responsible:

University Lecturer Tuula Hurtig

Working life cooperation:

-

Other information:

-

043037P: Public Health, 6 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Taina Lajunen, Timo Hugg

Opintokohteen kielet: Finnish

ECTS Credits:

6 ECTS credits / 162 hours of work

Language of instruction:

Finnish/English

Timing:

The course is held at the 2nd spring semester (C4).

Learning outcomes:

Upon completion of the course, the student will:

- understand the essential challenges of public health
- identify the common chronic diseases and their risk factors
- understand the structure and function of Finnish health care system
- be aware of the importance of assessment and surveillance of health status and health promotion among population, and as an expert in health care sector he/she is able to put it into practice
- understand that health is linked to the lifestyle of the individual and to social and global development
- understand the system and the function of environmental health
- identify the most harmful environmental factors and the health risks associated with those
- understand the role of doctor in the field of environmental health
- understand the basic epidemiologic thinking, is able to define the basic concepts of epidemiology, is able to identify the central types of epidemiologic studies and know how to apply epidemiological methods in public health

Contents:

The course consists of three parts of public health:

1. Basics of public health

- Prevalence and incidence of population health in different phase of life
- Lifestyle, behavior and health
- Socioeconomic factors and health
- Finnish health care system
- Assessment and surveillance of health status among population
- Health promotion
- Global public health

2. Epidemiology

- Causal thinking in epidemiology
- Measures of disease occurrence and effect
- Types of epidemiologic studies: cohort studies and case-control studies
- Data analysis and reasoning

3. Environmental health

- Environment and health
- Risk factors in outdoor and indoor environments and their health effects
- Climate change, temperature and health
- Environmental radiation and noise
- Microbiological and chemical risks of drinking water and food
- Municipal environmental health control and exceptional situations related to environmental health
- Role of doctor in environmental health

Mode of delivery:

Face-to-face teaching and web-based teaching

Learning activities and teaching methods:

Lectures 17 h, group work 15 h, seminars 20 h, exams 6 h and independent work 104 h. Independent work includes preparation for the exams and producing the written works and presentations for the seminars. Written works, as population profile and health promotion, will be broken down in group meetings. Essay and presentation for the public health seminar are produced of the common chronic diseases as a group work. Environmental health part of the course will be covered during four half-day seminars. Epidemiology exercises 1-5 will be performed as a group work, and exercise 6 "critical evaluation of an article" is an individual exercise implemented in Moodle. The course includes three mid exams.

Target group:

The students from medicine and dentistry

Recommended optional programme components:

The course has to be completed during preclinical period of medical and dental studies. The course is linked to Advanced course in public health sciences (040116A, C11) –course.

Recommended or required reading:

Required: Lecture material and exercise material.

Recommended literature:

Kansanterveystiede. Kauhanen J, Erkkilä A, Korhonen M, Myllykangas M, Pekkanen J. Sanoma Pro Oy, 2013.

Rothman KJ. Epidemiology: and introduction. 2nd edition. Oxford University Press, New York, 2012.

Mussalo-Rauhamaa, Pekkanen, Tuomisto, Vuorinen. Ympäristöterveys. Kustannus Oy Duodecim, 2nd edition, 2020. 297 pages (in Finnish).

Assessment methods and criteria:

Participation to the mandatory teaching as well as passing the written works, presentations, Moodle exercises, and exams. The assessment criteria are based on the learning outcomes of the course.

Grading:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Timo Hugg (Public health, Environmental health), Taina Lajunen (Epidemiology)

Working life cooperation:

Population profile and lifestyle guidance will be implemented during the practical training in health centers which is carried out during or before the course. Environmental health course includes the guest lectures of the environmental health experts.

043038P: Radiation Safety in Medicine, 2 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Miika Nieminen, Meri Ojakangas

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS/53 hours of work

Language of instruction:

Finnish

Timing:

2nd autumn semester

Learning outcomes:

After the course the student can describe different forms of radiation and their application in medicine, explain the biological effects and mechanisms of radiation, define the decrees pertaining to the use of radiation and describe the radiation safety measures in the hospital working environment. The student can apply knowledge in practice and guide others to safe working practices.

Contents:

Basics of radiation physics, basics of radiation biology, decree of radiation protection, radiation safety procedures in working environment, the use of radiation in medicine.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 19h, feedback session for teamwork assignments 4h, preparation of team assignment and independent studying 30h. Final exam.

Target group:

Students of medicine and dental medicine

Recommended optional programme components:

The course is an independent entity and does not require additional studies carried out at the same time. Nonetheless, the course relates to tuition of imaging diagnostics and oncology

Recommended or required reading:

Säteily ja sen havaitseminen, Tarja K. Ikäheimonen (toim). Säteily- ja ydinturvallisuus –kirjasarja. STUK, 2002

Säteilyn terveysvaikutukset, Wendla Paile (toim). Säteily- ja ydinturvallisuus –kirjasarja. STUK, 2002

Säteilyn käyttö, Olavi Pukkila (toim), Säteily- ja ydinturvallisuus –kirjasarja. STUK, 2004

Kliininen radiologia, Roberto Blanco Sequeiros ym (toim), Duodecim, 2016

Assessment methods and criteria:

Mandatory parts of the course: Preparation of team assignment and participation to presentations. Final exam in EXAM-environment.

Read more about assessment criteria at the University of Oulu webpage.

Grading:

Pass/fail

Person responsible:

Professor Miika Nieminen

Working life cooperation:

Lecturers are experts in clinical use of radiation.

Other information:

The course is statutory radiation protection education in medical training.

091782S: Acting as a Dentist in the Oral Health Care System, 3 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS credits contains courses 091782S-01 Immediate Supervisor of Oral Health Care (1.5 credits) and 091782S-02 Acting as a Dentist in the Oral Health Care System (1.5 credits)

Language of instruction:

Finnish

Timing:

5th study year

Learning outcomes:

See learning outcomes of

- 091782S-01 Immediate Supervisor of Oral Health Care
- 091782S-02 Acting as a Dentist in the Oral Health Care System

Contents:

Work management, superior and subordinate in oral health care, life-long learning, social and health care system in Finland, current topics of health care

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures, group work and self-study

Target group:

5th year dental students

Recommended optional programme components:

Contains courses 091782S-01 Immediate Supervisor of Oral Health Care (1.5 credits) and 091782S-02 Acting as a Dentist in the Oral Health Care System (1.5 credits)

Recommended or required reading:

Material is given during the course

Assessment methods and criteria:

The course unit utilizes verbal grading scale pass/fail.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala

Raija Lähdesmäki

Other information:

Course 091782S Immediate Supervisor of Oral Healthcare is provided in collaboration with Oulu University of Applied Sciences.

Course is part of Basic knowledge and skills in dentistry strand.

Compulsory

091782S-02: Acting as a Dentist in the Oral Health Care System, 0 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

1,5 ECTS credits

Language of instruction:

Finnish

Timing:

5th study year

Learning outcomes:

Upon completion of the course, the student will be able to

- have knowledge of the social and health care service system in Finland
- understand the current topics of health care such as health policy, social security, and health economics
- know the possibilities of working in the private sector
- adopt to undertake a holistic approach to the management of the patients and is able to appraise the treatment of patients with special needs

Contents:

Social and health care system in Finland, current topics of health care

Mode of delivery:

Face-to face teaching

Learning activities and teaching methods:

Lectures 17 h, self-study 25 h

Target group:

5th year dental students

Recommended optional programme components:

Part of 0901782S Healthcare V 3 ECTS or study module

Recommended or required reading:

Recent scientific and other relevant material provided during this course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, DDS Viivi Alaraudanjoki

Other information:

Course is part of Basic Skills in Dentistry strand

091782S-01: Immediate Supervisor of Oral Health Care, 0 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

1.5 ECTS credits

Language of instruction:

Finnish

Timing:

5th study year

Learning outcomes:

Upon completion of the course, the student will be able to

- know concepts and challenges in work management and in the tasks of a superior and a subordinate
- can act as a superior in oral health care
- undertake continuing professional development supporting the concept of life-long learning

Contents:

Work management, superior and subordinate in oral health care, life-long learning

Mode of delivery:

Face-to face teaching

Learning activities and teaching methods:

Lectures 12 h, self-study 28 h

Target group:

5th year dental students and 4th year dental hygienist students

Recommended optional programme components:

Part of 0901782S Healthcare V 3 ECTS cr study module

Recommended or required reading:

Järvinen P. Menestyvän työyhteisön pelisäännöt. Talentum, 2009.

Recent scientific and other relevant material provided during this course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, DDS Vesa Pohjola

Other information:

Course is part of Basic Skills in Dentistry strand

090603S: Advanced Practical Training DC11, 30 op

Voimassaolo: 01.08.2011 -

Opiskelumuoto: Advanced Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

30 ECTS credits

Language of instruction:

Finnish

Timing:

6th year, Autumn term

Learning outcomes:

After practical training the student identifies and manages the field of a dentist in a basic health care. After the training the student knows the Health Center as an operational environment including specialist medical care and expertise in dentistry as well as different sectors offering basic health care in Finland.

Contents:

Student in Dentistry makes an application for employment to Health Center that has a valid agreement with the University. The Finnish Dental Association keeps a national register of the valid Health Centers. Student writes down the target for the advanced clinical training with the tutors of the Institute of Dentistry and the Dental Training Clinic before starting the practice in the training plan. Student familiarizes with the Finnish Health care systems and Dentistry in Health Centers. Student makes examination, diagnoses, treatment plan and carries out the treatment in need of oral and dental care including preventative care. During the clinical training student evaluates how the target is becoming true with the mentor(s) in the Health Center. At the end of the practical training student writes down the final report that is discussed and signed by the main mentor in Health Center and student and gives the reports the learning outcomes to the tutors in the University and training clinic to the Institute of Dentistry to get the acceptance of the advanced practical training. Student gives written feedback of the practical training in Health Center, how the target has been achieved and the level of know-how to working life.

Mode of delivery:

Job placement 6 months

Learning activities and teaching methods:

Pages 1-2 in the Study-book contains the information of the study rights. Otherwise it is student's m means to document the entire training. Student treats patients in dentistry in basic health care in co-operation with dental team. Health Center organizes the mentoring and overall circumstances so that the plan for the clinical training can be reached according to the plan. Health Center names the main mentor who has been working at least two years as a full-time dentist and deputies and other mentors if needed. The maximum for the absence, because of the studies in Dentistry, during the clinical training as full-time job is 14 calendar days.

Target group:

Dental students

Prerequisites and co-requisites:

The Institute of Dentistry assigns the permission to start the advanced practical training. The prerequisite for the permission is that the student has passed the clinical phase of the studies (40 ECTS credits). In addition, theoretical studies must be done except for two final exams and the thesis (20 ECTS credits) need to be written and uploaded to Laturi –archiving system, oral speech has been done and the maturity exam accepted.

Recommended optional programme components:

-

Recommended or required reading:

Materials in the curriculum of Dentistry, materials from the Health Center

Assessment methods and criteria:

Six-month period of full-time job in a Health Center including a preliminary plan, final report and assessment of the practical training and level of know-how to working life.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

pass/fail

Person responsible:

Programme director/Raija Lähdesmäki, Adjunct professor

Ritva Näpänkangas, Adjunct professor

Working life cooperation:

Advanced practical training is carried out by working as a clinical dentist in a Health Center in Finland.

Other information:

Accepted advanced practical training is carried out according to the signed preliminary plan in a Health Center that has a valid agreement between the University and Health Center.

091711A: Cariology I, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Leo Tjäderhane, Marja-Liisa Laitala, Tarja Tanner, Vuokko Anttonen

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

2 ECTS credits

Language of instruction:

Finnish

Timing:

2nd study year spring term

Learning outcomes:

Upon completion of the course, the student will be able to

- understand factors associated with development of dental caries lesions as well as those protecting from caries lesions
- be aware of the histology of dental hard tissues as well as histo-pathology of dental caries
- know prevalence of caries as well as indices meant for measuring the disease

Contents:

Histology of dental tissues, histopathology, microbiology, saliva, diet, sugars, prevalence of caries, indices

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

lectures 20 hours, hands-on practices 7 hours, self-studies 7 hours, total of 54 hours = 2 ECTS cr

Hands-on practices 100 % attendance

Target group:

2nd year dental students

Recommended optional programme components:

Passed 091711A Cariology I course and accepted examination is required to proceed to hands-on course 091712A Cariology II in semester 5 (DC5)

Recommended or required reading:

Nanci A (ed.). Ten Cate's Oral Histology: Development, Structure, and Function. Edited by Antonio Nanci. Seventh edition; ss. 141-238. St. Louis, Mosby Elsevier.

Dental Caries. The Disease and its Clinical Management. Edited by Ole Fejerskov, Bente Nyvad and Edwina Kidd. Third Edition. Oxford, Wiley Blackwell.

OR

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

Books, DC 4 (required in the exam after Cariology I course in the beginning of 3rd study year DC5)

Ten Cate's Oral Histology. Development, Structure, and Function. 7nd Ed. Antonio Nanci, editor. Ss. 141-238 (98 s.)

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

o The disease; chapters 1-4, pages 10-60

Fejerskov O, Nyvad B, Kidd E. Dental Caries. The Disease and its Management. 3rd Ed.

- Part I The disease and its diagnosis

o Chapter 2 Dental caries: what is it?, ss. 7-9 (3 s.)

o Chapter 4 How big is the problem? Epidemiological features of dental caries, ss. 21-41 (21 s.)

- Part III The caries lesion and its biological determinants

o Chapter 7 Biofilms in caries development, ss. 107-129 (24 s.)

o Chapter 6 Saliva and caries development, ss. 83-105 (23 s.)

o Chapter 9 Demineralization and remineralization: the key to understanding clinical manifestations of dental caries ss. 155-169 (15 s.)

- Part IV Controlling dental caries

o Chapter 14 Fluorides in caries control ss. 245-272 (28 s.)

o Chapter 13 The caries control concepts, ss. 235-242 (8 s.)

o Chapter 15 Role of oral hygiene, ss. 277-283 (7 s.)

o Chapter 8 Diet and dental caries, ss. 133-151 (19 s.)

Linkki kurssikirjoihin: <https://oula.finna.fi/List/773368>

Assessment methods and criteria:

web-based exam

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail. Passed 091711A Cariology I examination is required to proceed to course 091712A Cariology II.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD Tarja Tanner

Other information:

Details of the activities and teaching methods and possible compulsory attendance will be agreed in the beginning of the respective courses.

Passing the midterm exams is the prerequisite for attending the clinical studies and final exam.

Students are encouraged to give feed-back after the course.

A540231: Cariology II, 9 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Study module

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Tarja Tanner, Leo Tjäderhane, Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

A540231 Cariology II study module 9 ECTS cr includes courses 091792A Controlling Dental Caries (1 ECTS cr) and 091793A Comprehensive Cariology (8 ECTS cr).

Language of instruction:

Finnish

Timing:

3rd study year

Learning outcomes:

Upon completion of the course, the student will be able to

- know how to control caries at individual level
- know how to restore lesions using current methods and materials
- understand factors associated with development of dental caries and their impact in progression of dental lesions and eventually pulpal infections (ICDAS/ICCMS)
- know the principles of cariological and endodontics diagnostics
- be competent in the principles of restorative dental treatment and materials
- know how to restore lesions using current methods and materials

Contents:

Caries diagnostics, risk assessment, caries control at individual level, materials and methods in restorative dentistry, treatment of deep dentinal lesions, endodontic pathogenesis and diagnostics.

Mode of delivery:

Face-to-face teaching; lectures and hands-on training

Hands-on-training 100 % attendance required

Learning activities and teaching methods:

Lectures 37h (74h work for student), hands on work 169, total of 243 hours work for student (=9 ECTS cr)

Target group:

3rd year dental students

The study module includes the courses 091792A Controlling Dental Caries (1 ECTS cr) and 091793A Caries Risk, Diagnostics and Restorative Treatment (8 ECTS cr).

091792A Dental hygienist students also participate in the Controlling Dental Caries course.

Prerequisites and co-requisites:

Passed 091711A Cariology I required

Recommended optional programme components:

No options. Passed course is necessary for entering clinical training with patients.

Recommended or required reading:

Nanci A (ed.). Ten Cate's Oral Histology: Development, Structure, and Function. Edited by Antonio Nanci. Seventh edition; ss. 141-238. St. Louis, Mosby Elsevier.

Dental Caries. The Disease and its Clinical Management. Edited by Ole Fejerskov, Bente Nyvad and Edwina Kidd. Third Edition. Oxford, Wiley Blackwell.

OR

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

Books, DC 5 (required in the exam after Cariology I course in the beginning of 3rd study year DC5)

Ten Cate's Oral Histology. Development, Structure, and Function. 7nd Ed. Antonio Nanci, editor. Ss. 141-238 (98 s.)

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

o The disease; chapters 1-4, pages 10-60

Fejerskov O, Nyvad B, Kidd E. Dental Caries. The Disease and its Management. 3rd Ed.

- Part I The disease and its diagnosis

o Chapter 2 Dental caries: what is it?, ss. 7-9 (3 s.)

o Chapter 4 How big is the problem? Epidemiological features of dental caries, ss. 21-41 (21 s.)

- Part III The caries lesion and it's biological determinants

o Chapter 7 Biofilms in caries development, ss. 107-129 (24 s.)

o Chapter 6 Saliva and caries development, ss. 83-105 (23 s.)

o Chapter 9 Demineralization and remineralization: the key to understanding clinical manifestations of dental caries ss. 155-169 (15 s.)

- Part IV Controlling dental caries

o Chapter 14 Fluorides in caries control ss. 245-272 (28 s.)

o Chapter 13 The caries control concepts, ss. 235-242 (8 s.)

o Chapter 15 Role of oral hygiene, ss. 277-283 (7 s.)

o Chapter 8 Diet and dental caries, ss. 133-151 (19 s.)

Linkki kurssikirjoihin: <https://oula.finna.fi/List/773368>

Assessment methods and criteria:

Accepted hands-on training

Written exam includes contents of 091711A Cariology I and A540231 Cariology II

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Hands-on training utilizes verbal grading scale Pass/Fail

Person responsible:

Professor Marja-Liisa Laitala, PhD Tarja Tanner

Other information:

Part of Basic knowledge and skills in dentistry strand. Course 091792A Controlling dental caries (1 ECTS cr) is provided in collaboration with Oulu University of Applied Sciences.

Compulsory

091792A: Controlling dental caries, 1 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala, Tarja Tanner

Opintokohteen kielet: Finnish

ECTS Credits:

091792A Controlling Dental Caries (1 ECTS cr) course is included to study module A540231 Cariology II (9 ECTS cr)

Language of instruction:

Finnish

Timing:

3rd study year

Learning outcomes:

Upon completion of the course, the student will be able to

- know how to control caries at individual level
- know the basic methods of caries control

Contents:

Caries control at individual level

Mode of delivery:

Face-to-face teaching; lectures and hands-on training

Hands-on-training 100 % attendance required

Learning activities and teaching methods:

Lectures integrated to hands-on training and group work, total of 27 hours work for student (=1 ECTS cr)

Target group:

3rd year dental students and dental hygienist students

Recommended optional programme components:

No options.

Recommended or required reading:

Recent scientific and other relevant articles provided during the course.

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor Marja-Liisa Laitala, PhD Tarja Tanner

Other information:

Part of Basic knowledge and skills in dentistry strand and is provided in collaboration with Oulu University of Applied Sciences.

091793A: Caries Risk, Diagnostics and Restorative Treatment, 8 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala, Tarja Tanner

Opintokohteen kielet: Finnish

ECTS Credits:

091793A Caries Risk, Diagnostics and Restorative Treatment (8 ECTS cr) course is included to study module A540231 Cariology II (9 ECTS cr)

Language of instruction:

Finnish

Timing:

3rd study year

Learning outcomes:

Upon completion of the course, the student will be able to

- understand factors associated with development of dental caries and their impact in progression of dental lesions and eventually pulpal infections (ICDAS/ICCMS)
- know the principles of cariological and endodontics diagnostics
- be competent in the principles of restorative dental treatment and materials
- know how to restore lesions using current methods and materials

Contents:

Caries diagnostics, risk assessment, caries control at individual level, materials and methods in restorative dentistry, treatment of deep dentinal lesions, endodontic pathogenesis and diagnostics.

Mode of delivery:

Face-to-face teaching; lectures and hands-on training
Hands-on-training 100 % attendance required

Learning activities and teaching methods:

Lectures 35h (70h work for student), hands-on training and self-studies, total of 146h work for student
Total of 216 hours (=8 ECTS cr)

Target group:

3rd year dental students

Prerequisites and co-requisites:

Passed 091711A Cariology I required

Recommended optional programme components:

No options. Passed course is necessary for entering clinical training with patients.

Recommended or required reading:

Nanci A (ed.). Ten Cate's Oral Histology: Development, Structure, and Function. Edited by Antonio Nanci. Seventh edition; ss. 141-238. St. Louis, Mosby Elsevier.

Dental Caries. The Disease and its Clinical Management. Edited by Ole Fejerskov, Bente Nyvad and Edwina Kidd. Third Edition. Oxford, Wiley Blackwell.

OR

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

Books, DC 5 (required in the exam after Cariology I course in the beginning of 3rd study year DC5)

Ten Cate's Oral Histology. Development, Structure, and Function. 7th Ed. Antonio Nanci, editor. Ss. 141-238 (98 s.)

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

o The disease; chapters 1-4, pages 10-60

Fejerskov O, Nyvad B, Kidd E. Dental Caries. The Disease and its Management. 3rd Ed.

- Part I The disease and its diagnosis

o Chapter 2 Dental caries: what is it?, ss. 7-9 (3 s.)

o Chapter 4 How big is the problem? Epidemiological features of dental caries, ss. 21-41 (21 s.)

- Part III The caries lesion and its biological determinants

o Chapter 7 Biofilms in caries development, ss. 107-129 (24 s.)

o Chapter 6 Saliva and caries development, ss. 83-105 (23 s.)

o Chapter 9 Demineralization and remineralization: the key to understanding clinical manifestations of dental caries ss. 155-169 (15 s.)

- Part IV Controlling dental caries

o Chapter 14 Fluorides in caries control ss. 245-272 (28 s.)

o Chapter 13 The caries control concepts, ss. 235-242 (8 s.)

o Chapter 15 Role of oral hygiene, ss. 277-283 (7 s.)

o Chapter 8 Diet and dental caries, ss. 133-151 (19 s.)

Linkki kurssikirjoihin:

<https://oula.finna.fi/List/773368>

Assessment methods and criteria:

Accepted hands-on training

Written exam includes contents of 091711A Cariology I and A540231 Cariology II

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Hands-on training utilizes verbal grading scale Pass/Fail

Person responsible:

Profesor Marja-Liisa Laitala, PhD Tarja Tanner

Working life cooperation:

The course does not contain working life cooperation

Other information:

Part of Basic knowledge and skills in dentistry strand

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

7 ECTS credits

Language of instruction:

Finnish

Timing:

5th year, Spring term

Learning outcomes:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Contents:

Clinical training

The clinical training comprises work at the City of Oulu / Dental Training Clinic in collaboration with the University Hospital of Oulu. The clinical training is part of the studies beginning the end of the fifth semester and continuing to the end of the tenth semester until the credit points are full and the practical training will be approved. Before the clinical training the theoretical preclinical studies, course of internal medicine and the courses of the fifth semester have to be approved.

The clinical training consists of comprehensive patient care under supervision of the clinical teachers in different subjects of dentistry such as clinical radiology and diagnostics, treatment planning, oral and jaw surgery, orthodontics, cariology, endodontics, pedodontics, periodontology and prosthetic dentistry. The clinical training includes also on-duty service in different fields of dentistry.

Clinical training includes practice in preventive dentistry and team work in Health Centers. During the sixth semester students go to schools to work for health prevention. During the fourth semester students participate in oral inspections for pre-school children performed by dental hygienists.

Mode of delivery:

Look at "Contents"

Learning activities and teaching methods:

Look at "Contents"

Target group:

5th year dental students

Prerequisites and co-requisites:

Learning of the 1st – 4th year and 5th year autumn studies

Recommended optional programme components:

-

Recommended or required reading:

-

Assessment methods and criteria:

Priority of the assessment is self-assessment and teaching personnel is steering the development of the know-how by supervision.

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

The course unit utilizes 0-5 grading. Clinical studies need to be approved.

Person responsible:

Senior researcher Raija Lähdesmäki (Raija.Lahdesmaki at oulu.fi), Principal chief Päivi Harju (Paivi.B.Harju at ouka.fi)

Working life cooperation:

Yes

Other information:

Clinical studies continue until they can be considered approved based on Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet.

091701A: Clinical Training DC5, 1 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS credit

Language of instruction:

Finnish

Timing:

3rd study year, Autumn term (DC5)

Learning outcomes:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Contents:

Clinical training

The clinical training (40 ects credits) comprises work at the City of Oulu / Dental Training Clinic in collaboration with the University Hospital of Oulu. The clinical training is part of the studies beginning the end of the fifth semester and continuing to the end of the tenth semester until the credit points are full and the practical training will be approved. The clinical training consists of comprehensive patient care under supervision of the clinical teachers in different subjects in Dentistry.

Mode of delivery:

Look at "Contents"

Learning activities and teaching methods:

Look at "Contents"

Target group:

3rd year dental students

Prerequisites and co-requisites:

Theoretical preclinical studies (1st and 2nd year studies) and the courses of fifth semester (3rd year, Autumn term)

Recommended optional programme components:

-

Recommended or required reading:

Introduction materials

Assessment methods and criteria:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Look at "Contents"; clinical assessment

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Programme manager Raija Lähdesmäki (Raija.Lahdesmaki at oulu.fi), Principal chief Päivi Harju (Paivi.B.Harju at ouka.fi)

Working life cooperation:

Yes

Other information:

-

091702A: Clinical Training DC6, 7 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

7 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year, Spring term

Learning outcomes:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Contents:

Clinical training

The clinical training comprises work at the City of Oulu / Dental Training Clinic. Before the clinical training the theoretical preclinical studies, course of internal medicine and the courses of the fifth semester have to be approved. The clinical training consists of comprehensive patient care in pairs under supervision of the clinical teachers in different subjects of dentistry such as clinical radiology and diagnostics, treatment planning, oral and jaw surgery, orthodontics, cariology, endodontics, periodontology. The clinical training includes also on-duty service in different fields of dentistry.

Clinical training includes practice in preventive dentistry and team work in Health Centers. During the sixth semester students go to schools to work for health prevention in collaboration with oral hygienists.

Mode of delivery:

Look at "Contents"

Learning activities and teaching methods:

Look at "Contents"

Target group:

3rd year dental students

Prerequisites and co-requisites:

Theoretical preclinical studies (1st and 2nd year studies) and courses of the 5th semester

Recommended optional programme components:

-

Recommended or required reading:

-

Assessment methods and criteria:

Priority of the assessment is self-assessment and teaching personnel is steering the development of the know-how by supervision.

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Person responsible:

Programme manager Raija Lähdesmäki (Raija.Lahdesmaki at oulu.fi), Principal chief Päivi Harju (Paivi.B.Harju at ouka.fi)

Working life cooperation:

Yes

Other information:

-

091703A: Clinical Training DC7, 8 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

8 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year, Autumn term

Learning outcomes:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Contents:

Clinical training

The clinical training comprises work at the City of Oulu / Dental Training Clinic in collaboration with the University Hospital of Oulu. The clinical training is part of the studies beginning the end of the fifth semester and continuing to the end of the tenth semester until the credit points are full and the practical training will be approved. Before the clinical training the theoretical preclinical studies, course of internal medicine and the courses of the fifth semester have to be approved. The clinical training consists of comprehensive patient care under supervision of the clinical teachers in different subjects of dentistry such as clinical radiology and diagnostics, treatment planning, oral and jaw surgery, orthodontics, cariology, endodontics, pedodontics, periodontology and prosthetic dentistry.

The clinical training includes also on-duty service in different fields of dentistry. Clinical training includes practice in preventive dentistry and team work in Health Centers. During the sixth semester students go to schools to work for health prevention. During the fourth semester students participate in oral inspections for pre-school children performed by dental hygienists.

Mode of delivery:

Look at "Contents".

Learning activities and teaching methods:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Target group:

4th year dental students

Prerequisites and co-requisites:

Theoretical preclinical studies (1st and 2nd year studies) and courses of the 3rd year studies

Recommended optional programme components:

-

Recommended or required reading:

-

Assessment methods and criteria:

Priority of the assessment is self-assessment and teaching personnel is steering the development of the know-how by supervision.

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Person responsible:

Programme manager Raija Lähdesmäki (Raija.Lahdesmaki at oulu.fi), Principal chief Päivi Harju (Paivi.B.Harju at ouka.fi)

Working life cooperation:

Yes

Other information:

-

091704A: Clinical Training DC8, 8 - 9 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

9 ECTS credits

Language of instruction:

Finnish

Timing:

4th year, Spring term

Learning outcomes:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Contents:

Clinical training

The clinical training comprises work at the City of Oulu / Dental Training Clinic in collaboration with the University Hospital of Oulu. The clinical training is part of the studies beginning the end of the fifth semester and continuing to the end of the tenth semester until the credit points are full and the practical training will be approved. The clinical training consists of comprehensive patient care under supervision of the clinical teachers in different subjects of dentistry such as clinical radiology and diagnostics, treatment planning, oral and jaw surgery, orthodontics, cariology, endodontics, pedodontics, periodontology and prosthetic dentistry. The clinical training includes also on-duty service in different fields of dentistry.

Clinical training includes practice in preventive dentistry and team work in Health Centers. During the sixth semester students go to schools to work for health prevention. During the fourth semester students participate in oral inspections for pre-school children performed by dental hygienists.

Mode of delivery:

Look at "Contents"

Learning activities and teaching methods:

Look at "Contents"

Target group:

4th year dental students

Prerequisites and co-requisites:

Learning of the 1st - 3rd year studies and 4th year autumn studies

Recommended optional programme components:

-

Recommended or required reading:

-

Assessment methods and criteria:

Priority of the assessment is self-assessment and teaching personnel is steering the development of the know-how by supervision.

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

The course unit utilizes verbal grading scale pass/fail to get permission for temporary professional practice rights under supervision in basic health care.

Person responsible:

Programme manager Raija Lähdesmäki (Raija.Lahdesmaki at oulu.fi), Principal chief Päivi Harju (Paivi.B.Harju at ouka.fi)

Working life cooperation:

Yes

Other information:

OSCE clinical examination is pre-requisite for temporary professional practice rights under supervision in basic health care.

091705A: Clinical Training DC9, 8 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

8 ECTS credits

Language of instruction:

Finnish

Timing:

5th year, Autumn term

Learning outcomes:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Contents:

Clinical training

The clinical training comprises work at the City of Oulu / Dental Training Clinic in collaboration with the University Hospital of Oulu. The clinical training is part of the studies beginning the end of the fifth semester and continuing to the end of the tenth semester until the credit points are full and the practical training will be approved. The clinical training consists of comprehensive patient care under supervision of the clinical teachers in different subjects of dentistry such as clinical radiology and diagnostics, treatment planning, oral and jaw surgery, orthodontics, cariology, endodontics, pedodontics, periodontology and prosthetic dentistry. The clinical training includes also on-duty service in different fields of dentistry.

Clinical training includes practice in preventive dentistry and team work in Health Centers. During the sixth semester students go to schools to work for health prevention. During the fourth semester students participate in oral inspections for pre-school children performed by dental hygienists.

Mode of delivery:

Look at "Contents"

Learning activities and teaching methods:

Look at "Contents"

Target group:

5th year dental students

Prerequisites and co-requisites:

Learning of the 1st – 4th year studies

Recommended optional programme components:

-

Recommended or required reading:

-

Assessment methods and criteria:

Priority of the assessment is self-assessment and teaching personnel is steering the development of the know-how by supervision.

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

General clinical assessment in Dentistry and clinical learning outcomes in Finland based on ADEE publications [Hammaslääketieteen yleinen kliininen arviointi ja oppiainekohtaiset kliiniset osaamistavoitteet, KLART].

Person responsible:

Programme manager Raija Lähdesmäki (Raija.Lahdesmaki at oulu.fi), Principal chief Päivi Harju (Paivi.B.Harju at ouka.fi)

Working life cooperation:

Yes

Other information:

-

091713A: Endodontics I, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kristiina Oikarinen-Juusola

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year autumn and spring semester

Learning outcomes:

Upon completion of the course, the student

- understands basic endodontic diagnostics
- theoretically as well as in practice is able to perform basic endodontic treatments with hand files and one rotary endodontic system

Contents:

Morphology and pathogenesis of pulp, indications and contraindications for endodontic treatment, classification of different endodontic diagnoses, prevention, theoretical basis of endodontics and clinical performing of endodontic treatment

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 6 h (mandatory), phantom lab 28 h (mandatory), exam 2h

100 % attendance

Target group:

3rd year dental students

Prerequisites and co-requisites:

Cariology I and II passed

Recommended optional programme components:

No alternative courses. Part of the strand of Basic Knowledge and Skills in Dentistry.

Recommended or required reading:

Lecture materials (in Finnish)

Book: Haapasalo, Kotiranta, Sirén, Haapasalo, Endal: Käytännön juurihoito. Savion kirjapaino Oy 2009.

Juurihoidon Käypä Hoito -suositus.

Additional material:

Blicher, Pyles, Lin: Endodontics Review: a study guide. Quintessence Publishing Co, Inc 2016

Pocket Atlas of Endodontics (Thieme)

Assessment methods and criteria:

Participation to lectures and phantom lab

Exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Phantom lab: pass/fail according to participation (mandatory lab training)

Exam utilizes numerical scale 1-5; zero stands for a fail.

Person responsible:

Lecturer Kristiina Oikarinen-Juusola

Lecturer Anne Laajala

Working life cooperation:

This course is required to have a licence to treat endodontic patients in the teaching clinic of the city of Oulu.

Other information:

Details of the activities and teaching methods and possible compulsory attendance will be agreed in the beginning of the respective courses.

Passing the midterm exams is the prerequisite for attending the clinical studies and final exam.

Students are encouraged to give feed-back after the course.

091713S: Endodontics II, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kristiina Oikarinen-Juusola

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits

Language of instruction:

Finnish

Timing:

4th and 5th year; Advanced special studies

Learning outcomes:

Upon completion of the course, the student is able to master

- advanced endodontic diagnostics and treatment
- endodontic complications: etiology, prevention, diagnostics and treatment
- advanced use of rotary endodontic instruments

Contents:

Endodontic prognosis, acute endodontics, persistent endodontic infections, dental traumas from endodontic point of view. Advanced theoretical and practical knowledge of rotary endodontic instruments.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

4th year students in the fall (DC 7): lectures and phantom lab

4th to 5th year students (DC 8-10): lectures, theme day lectures of pain

100% attendance

Target group:

4th and 5th year dental students

Prerequisites and co-requisites:

Cariology I ja II, Endodontics I passed

Recommended or required reading:

Lecture materials (in Finnish)

Book: Haapasalo, Kotiranta, Sirén, Haapasalo, Endal. Käytännön juurihoito. 2.painos. Savion kirjapaino 2009

- Resorbitions p. 24-37
- Differential diagnostics p. 58-67
- Persistent apical periodontitis p. 172-1940

Käypä Hoito -suositus: Käytännön juurihoito

Assessment methods and criteria:

Pass/fail according to attendance.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Pass/fail

Person responsible:

Lecturer Kristiina Oikarinen-Juusola

Lecturer Anne Laajala

Working life cooperation:

Guest lectures and phantom lab trainings possible

Other information:

Details of the activities and teaching methods and possible compulsory attendance will be agreed in the beginning of the respective courses.

Passing the midterm exams is the prerequisite for attending the clinical studies and final exam.

Students are encouraged to give feed-back after the course.

090181Y: Growing identity as a dentist Part 1, 1 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS Credit

Language of instruction:

Finnish

Timing:

3rd study year, Spring term (DC6)

Learning outcomes:

The student has knowledge of the structure and the aim of the dental undergraduate studies. The student get acquainted with the University of Oulu and the Faculty of Medicine as an educational and scientific society. Student is able to do a study plan and perceive professional identity and growth into expertise.

Contents:

The structure and aim of the education in dentistry (DDS); personal study plan; the University of Oulu and the Faculty of Medicine as a study and research community; the social network during the studies; growing as a dentist. Participation in the Finnish Dental Congress and Exhibition organized by the Finnish Dental Society Apollonia.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures, infos, tutorial meetings, individual guiding, congress

Target group:

3rd year dental students

Recommended or required reading:

The curriculum in Dentistry and Medical studies and general tutor of the University of Oulu, conference material

Assessment methods and criteria:

Active participation in tutorials and personal curriculum, participation in the Finnish Dental Congress and Exhibition. Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Programme Director of Degree Programme in Dentistry Raija Lähdesmäki

Working life cooperation:

Networking with working life through the Finnish Dental Congress and Exhibition.

090182Y: Growing identity as a dentist Part 2, 0,5 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

0,5 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year, Autumn term (DC7)

Learning outcomes:

A student is able to make a roadmap of his studies and realize the identity as a dentist and growing expertise. A student realize the meaning of evidence-based medicine for the work as a dentist and is able to find answers to research questions.

Contents:

University of Oulu and Faculty of Medicine as a study and research community; The social network during the studies; Growing as a dentist; Evidence-based medicine

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Infos, tutorial meetings, working in small groups

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Dentistry study plan, personal study plan, databases

Recommended or required reading:

The curriculum in Dentistry and Medical studies and general tutor of the University of Oulu

Assessment methods and criteria:

Active participation in teacher tutorials and regular assessment of the personal curriculum. Working in small groups.

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Programme Director of Degree Programme in Dentistry Raija Lähdesmäki

Working life cooperation:

No

090183Y: Growing identity as a dentist Part 3, 0,5 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

0,5 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year, Spring term DC8 (-DC10)

Learning outcomes:

A student is able to make a roadmap of his studies and realize the identity as a dentist and growing expertise. A student is preparing to work as a dental post of deputy and knows his/her responsibilities and obligations.

Contents:

The University of Oulu and Faculty of Medicine as a study and research community; The social network during the studies; Growing as a dentist.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Infos, tutorial meetings, participation to educational event of Apollonia Symposium, (5th year student participation in Finnish Dental Congress and Exhibition)

Target group:

4th (-5th) year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

-

Recommended or required reading:

The curriculum in Dentistry and Medical studies and general tutor of the University of Oulu

Assessment methods and criteria:

Active participation in teacher tutorials and regular assessment of the personal curriculum. Participation to educational event of Apollonia Symposium (5th year student participation in Finnish Dental Congress and Exhibition).

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Programme Director of Degree Programme of Dentistry Raija Lähdesmäki

Working life cooperation:

Preparing to work as a dental post of deputy.

090182A: Introduction to Clinical Care, 5 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pernu, Hilikka Elina, Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year, Autumn term

Contents:

This study module contains:

090182A-01 Introduction to Clinical Work (1.5 Credits)

090182A-03 Nutrition (0.5 Credits)

090182A-04 Propedeutic Course on Surgery (1.5 Credits)

090182A-05 Healthcare I (1,0 Credits) and

090182A-06 Healthcare II (0,5 Credits)

For descriptions, see each course separately

Compulsory

090182A-01: Introduction to Clinical Work, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pernu, Hilikka Elina

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 1.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

DC5-DC6, Subject studies

Learning outcomes:

To become familiar with clinical environment related to clinical patient training.

Mode of delivery:

Blended teaching

Learning activities and teaching methods:

Lectures, demonstrations, visits, independent work, discussions

Target group:

Dental students of 3rd study year

Assessment methods and criteria:

Attendance

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Pass / Fail

Person responsible:

Senior Lecturer Hilikka Pernu

Raija Lähdesmäki

Other information:

Part of the strand of Basic knowledge and skills in dentistry

090182A-03: Nutrition, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 0.5 ECTS credits workload)

Language of instruction:

Finnish

Timing:

3rd study year, Autumn term

Learning outcomes:

Nutritional considerations in the treatment of different diseases (dyslipidemia, hypertension etc.

Evaluation of nutritional status and the significance of malnutrition

The principles of healthy diet, nutritional recommendations, problems in nutrition and consumption of food

The principles, aims and practical implementation of diet in the prevention and treatment of type 2

diabetes, dyslipidemia and hypertension and in the treatment of celiac disease

Familiarize into life style changes

Mode of delivery:

Blended teaching

Learning activities and teaching methods:

Lectures 6 hours

Possible Optima learning task

Target group:

3rd year dental student

Recommended optional programme components:

Part of the course of Introduction to oral health

Recommended or required reading:

Recommended reading

Vauhkonen I, Holmström P: Sisätaudit. (4. painos, 2012), Sanoma pro

Heikkilä J, Mäkijärvi M. EKG (2003), Kustannus Oy Duodecim

Heikkilä J, Kupari M, Airaksinen J, Huikuri H, Nieminen MS, Peuhkurinen K. Kardiologia (2008), Kustannus Oy Duodecim

Mäkijärvi M, Parikka H, Raatikainen P, Heikkilä J. EKG-tulkinnan työkirja (2006), Kustannus Oy Duodecim

Huovinen P, Hedman K, Heikkinen T, Järvinen A, Meri S, Vaara M. (toim.): Mikrobiologia – Mikrobiologia, immunologia ja infektiosairaudet, kirja 1 (1.-2. painos, 2011), Kustannus Oy Duodecim
 Hedman K, Heikkinen T, Huovinen P, Järvinen A, Meri S, Vaara M. (toim.): Immunologia – Mikrobiologia, immunologia ja infektiosairaudet, kirja 2 (2011), Kustannus Oy Duodecim
 Hedman K, Heikkinen T, Huovinen P, Järvinen A, Meri S, Vaara M. (toim.): Infektiosairaudet – Mikrobiologia, immunologia ja infektiosairaudet, kirja 3 (2011), Kustannus Oy Duodecim
 Pasternack, A (toim.): Nefrologia (2012), Kustannus Oy Duodecim Höckerstedt K, Färkkilä M, Kivilaakso E, Pikkarainen P. Gastroenterologia ja hepatologia (2007), Kustannus Oy Duodecim
 Kaarteenaho R., Brander P., Halme M., Kinnula V (toim.): Keuhkosairaudet – diagnostiikka ja hoito (2013), Kustannus Oy Duodecim
 Koskenvuo K. (toim.): Sairauksien ehkäisy (2003), Kustannus Oy Duodecim
 Martio J., Karjalainen A., Kauppi M., Kukkurainen M-L., Kyngäs H.: Reuma (2007), Kustannus Oy Duodecim
 Ruutu T, Rajamäki A, Lassila R, Porkka K. Veritaudit (2007), Kustannus Oy Duodecim
 Välimäki M, Sane T, Dunkel L.: Endokrinologia (2. painos, 2009) Kustannus Oy Duodecim
 Thaler M. The only EKG book you'll ever need. 4th ed (2003). Lippincott Williams & Wilkins

Assessment methods and criteria:

Presence in lecturers, possible Optima learning task
 Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

Pass / fail

Person responsible:

Professor Olavi Ukkola

Other information:

Part of the strand of Basic knowledge and skills in dentistry and the course of Introduction to Oral Health

090182A-04: Propedeutic Course on Surgery, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Juvonen, Tatu Sakari

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits

Language of instruction:

Finnish

Timing:

DC 5, Intermediate Studies

Learning outcomes:

Aim of this course is to introduce students to the surgical thinking and provide basic theoretical and practical information of major surgical diseases and treatment principles. After the course the student should understand the basics of infection control, the importance of hand hygiene in surgical units. Students will also learn the principles of surgical examination and diagnosis of the patient and the wound care.

Contents:

Lectures: Introductory session, lectures on surgical examination, writing the surgical medical history, surgical aseptic and hand hygiene, healthcare-associated infections of surgical patients, introduction to thoracic and vascular surgery, principles of wound care, principles of conservative and operative treatments of bone fractures, association between osteoporosis and low energy fractures.

Mode of delivery:

Lectures

Learning activities and teaching methods:

Lectures

Target group:

3rd year dental students

Prerequisites and co-requisites:

- Medical Biochemistry and Molecular Biology
- Pharmacology and toxicology
- Physiology
- Anatomy and medical cell and developmental biology
- Microbiology

Recommended optional programme components:

No

Recommended or required reading:

Lecture materials and parts of the textbook: Roberts, Alhava, Höckerstedt, Kivilaakso. 2010. Kirurgia. Kustannus Oy Duodecim. Helsinki. 2. uudistettu (tai uudempi) painos.

Assessment methods and criteria:

14 hours of lectures, 26 hours self-study work, grading pass/fail

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

approved/disapproved

Person responsible:

Professor Tatu Juvonen

Working life cooperation:

No

Other information:

Successful completion of the course is a prerequisite for the initiation of clinical studies in dentistry.

090182A-05: Healthcare I, 0 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 090182A Introduction to Clinical Care 5 ECTS cr study module, correspondents to 1 ECT credit workload

Language of instruction:

Finnish

Timing:

3rd study year

Learning outcomes:

Upon completion of the course, the student will be able to

- have knowledge of essential ethical principles in health care, legislation, and the contemporary laws applicable to the practice of dentistry
- have thorough understanding about the ethical responsibilities involved in the provision of care to individual patients and populations
- produce accurate patient records

Contents:

Essential legislation and ethical principles in health care

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures and group works 12 hours, self-study 3 hours

Target group:

3rd year dental students and 1st year dental hygienist students

Recommended optional programme components:

Part of 090182A Introduction to Clinical Care study module

Recommended or required reading:

Recent scientific and other relevant articles provided during the course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, BDS Viivi Alaraudanjoki

Other information:

Course is provided in collaboration with Oulu University of Applied Sciences

Course is part of Basic knowledge and skills in dentistry strand

090182A-06: Healthcare II, 0 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 090182A Introduction to Clinical Care 5 ECTS cr study module, corresponds to 0.5 ECT credit workload

Language of instruction:

Finnish

Timing:

3rd study year

Learning outcomes:

Upon completion of the course, the student will be able to

- professionally communicate with patients and other health care professionals and recognize his/her own limitations
- establish a good patient-dentist relationship
- know how to work ergonomically

Contents:

Communication skills in health care, basics in ergonomics

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 5 h, simulation exercises in ergonomics 4 h with 100% attendance required, self-study 5 h

Target group:

3rd year dental students

Recommended optional programme components:

Part of 090182A Introduction to Clinical Care study module

Recommended or required reading:

Recent scientific and other relevant articles provided during the course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, DDS Viivi Alaraudanjoki

Other information:

Course is part of Basic knowledge and skills in dentistry strand

090171A: Introduction to Oral Health I, 3 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pernu, Hilikka Elina, Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS cr

Language of instruction:

Finnish

Timing:

1st study year, Spring term

Contents:

This study module contains:

090171A-01 Introduction to Development of Occlusion and Orthodontics (0.5 ECTS cr),

090171A-02 Organization and Providers of Oral Health Care Services (0.5 ECTS cr) (includes lecture about Oral health, 2h)

090171A-03 Tooth Morphology (2 ECTS cr)

For descriptions, see each course separately.

Target group:

1st year students of Degree Programme in Dentistry

Other information:

Part of the strand of Basic Knowledge and Skills in Dentistry

090170P: Introduction to Oral Health II, 1 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Basic Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala, Tarja Tanner

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS credit

Language of instruction:

Finnish

Timing:

DC 4

Learning outcomes:

Promoting oral health among primary school children After this period the student knows in theory main oral health promoting and threatening factors (caries, periodontal diseases). As a team member he knows how to design and implement oral health promotion among secondary school children.

Introduction to primary dental care The aim is to give the students basic information on the organization of primary dental care and working model at the City of Oulu, Dental Clinic of Teaching Health Centre.

Introduction to specialized dental care and oral surgery The aim is to give the students basic information on the organization of specialized dental care (in ambulatory and hospital level), understanding the access criteria of the patients in special care and an overview on the different treatment protocols in specialized medical care.

Contents:

Promoting oral health among primary school children Lectures: Introductory lecture (3h) on most common non-communicable oral diseases, how they can be prevented in individual and population levels. Brief introduction to mental development stages of children. Preliminary plan of tasks among 1st and 2nd graders (4-5) In teams designing the tasks and implementation in detail (3 h) regarding health promotion.

Introduction to primary dental care. The students visits Dental Clinic of Teaching Health Centre twice during the first two years of dental studies. He/she follows the clinical work of senior dental student or assists for instance in using suction supervised by the student. For each visit approximately 2.5 h is scheduled.

Introduction to specialized dental care and oral surgery Lectures: Introductory Lecture (3h) which deals with the general outlines of the legislation and organization concerning dental special care. The patient's care pathway in hospital. The training system of specialization studies. Presentations from different dental specialities portraying the typical treatment protocols in hospital level oral care. Visit to the City of Oulu dental special care unit and to the Oulu University Hospital Dental and Oral Diseases outpatient clinic.

Mode of delivery:

Lectures, team/group assignments, clinical practice assignments

Learning activities and teaching methods:

Lectures, team/group assignments, clinical practice assignments

Target group:

2nd year dental students

Recommended or required reading:

Materials from lectures

Assessment methods and criteria:

Contact teaching, presence obligatory.

Read more about assessment criteria at the University of Oulu [webpage](#).**Grading:**

pass/fail

Person responsible:

Docent Marja-Liisa Laitala, PhD Tarja Tanner

Working life cooperation:

This entity will provide the dental student information about functions of different health sectors and also how to promote health in theory and on practice. During this entity the student get a chance to visit different organizations and meet health personnel: school, basic health care, specialized care units in basic health as well as in the hospital.

043001Y: Introduction to medical profession, 4 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Petri Kulmala

Opintokohteen kielet: Finnish

Leikkaavuudet:

ay043001Y Introduction to Medicine (OPEN UNI) 2.0 op

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

4 ECTS / 108 hours of work

Language of instruction:

Finnish

Timing:

1st year

Learning outcomes:

Upon completion of the course, the student:

- Is oriented to studying at the university (medicine or dentistry)
- Has time management skills
- Is aware of various roles of medical doctor and dentist in work life
- Understands the significance of professionalism and collegialism in studies and in work life
- Knows the specific features and principles of medical ethics
- Perceives the structure and function of health care system
- Understands the significance of interactive skills in studies and in the medical profession
- Is able to name the factors that effect the successful resuscitation and the risk factors related to resuscitation
- Is able to identify situations where immediate help or resuscitation is needed, and can prevent further progression of injuries and with simple procedures maintain life support
- Recognizes heart failure patient and is able to apply given treatment recommendation to the treatment of the patient, including cardiac massage and defibrillation
- Is motivated to maintain and practice resuscitation skills

Contents:

Orientation for new students: curriculum, studying medicine, study-culture matters

Medical profession: professionalism, various roles of a medical doctor, how to become a doctor?, collegialism, management of time and work

Introduction to health services

Basic life support

Mode of delivery:

The course is carried out as blended, multiform teaching

Learning activities and teaching methods:

Lectures: 38 h

Group work 60 h

Self study: 10 h

practical period in health care center 24 h

total. 108 h

Target group:

First year medical and dentistry students.

Prerequisites and co-requisites:

There is not any prerequisites for the course.

Recommended optional programme components:

-

Recommended or required reading:

All the material will be provided during the course.

Assessment methods and criteria:

Attending lectures, group work and practice; personal written tasks.

Grading:

The course utilizes verbal grading scale pass / fail.

Person responsible:

Petri Kulmala, Director of the medical curriculum.

Working life cooperation:

Part of the course is carried out at the local health care centers, in authentic work environment.

Other information:

043001Y-01 Orientation for new students: Petri Kulmala

043001Y-02 The Practice of Medicine: Petri Kulmala

043001Y-03 Introduction to health services: Markku Timonen

043001Y-04 Basic life support: Seppo Alahuhta

091607A: OSCE, 0 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Intermediate Studies

Laji: Practical training

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits

Language of instruction:

Finnish

Timing:

Fourth year students in Dentistry, Spring term

Learning outcomes:

A student shows the ability to work in the clinical context in different specialties in Dentistry during OSCE assessment. To pass the exam a student needs to adapt theory in clinical situations. Hygiene, interaction and legal affairs are included.

Contents:

Studies during the first four years

Mode of delivery:

Multiple-choice questions and tasks dealing with clinical problems

Learning activities and teaching methods:

Multiple-choice questions and tasks dealing with clinical problems

Target group:

4th year dental students

Prerequisites and co-requisites:

The exam has to be passed before getting the approval of the university to work in a temporary post in basic health care after 4th year studies (www.valvira.fi/en/)

Recommended optional programme components:

-

Recommended or required reading:

-

Assessment methods and criteria:

Multiple-choice questions and tasks dealing with clinical problems

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Pass/fail

Person responsible:

Ritva Näpänkangas, adjunct professor

Raija Lähdesmäki, adjunct professor

Working life cooperation:

OSCE is operated in the Teaching clinic.

Other information:

The exam has to be passed before going to work outside the Institute of Dentistry after four year studies (www.valvira.fi/en/)

091781S: Oral Health Care Services and Costs, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year

Learning outcomes:

Upon completion of the course, the student will be able to

- know strategies in oral health promotion and prevention of oral diseases
- promote oral health of individuals and populations
- recognize oral diseases as public health problems
- know the key issues and current topics in health policy
- know the practices in Finnish public oral health care system and knows when, how and where to refer a patient for treatment

Contents:

Oral health promotion among individuals and populations, health policy, public oral health care

Mode of delivery:

Face-to face teaching

Learning activities and teaching methods:

Lectures 24 h, learning diary and self-study 30 h

Target group:

4th year dental students

Recommended or required reading:

Recent scientific and other relevant articles provided during the course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, DDS Vesa Pohjola

Other information:

Course is part of Basic Skills in Dentistry strand

091761A: Oral Radiology I, 4 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Annina Sipola

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

4 ECTS credits

Language of instruction:

Finnish

Timing:

The course is held in the autumn semester, during 3rd year

Learning outcomes:

The student will be able to:

- understand the basic principles underlying of dental imaging, panoramic (and other extraoral imaging) and intraoral imaging and perform a dental X-ray examination.
- write radiological referral and report.

The student knows the importance of accurate diagnosis for successful treatment and radiographic appearances of

- normal anatomy, paranasal sinuses and temporomandibular joints
- dental anomalies
- dental caries, resorptions
- periodontal disease
- periapical inflammatory lesions

Contents:

- basic principles underlying of dental imaging, panoramic (and other extraoral imaging) and intraoral imaging and perform a dental X-ray examination.
- radiological referral and report.
- normal anatomy, paranasal sinuses and temporomandibular joints
- dental anomalies
- dental caries, resorptions
- periodontal disease
- periapical inflammatory lesions

Mode of delivery:

Face-to-face teaching

Moodle

Learning activities and teaching methods:

Lectures 18 h, fantom 12 h

Target group:

3rd year dental students

Prerequisites and co-requisites:

-

Recommended or required reading:

White, Pharoah; Oral Radiology: Principles and Interpretation

Assessment methods and criteria:

First test utilizes grading scale Pass/ Fail. Second test utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

First test utilizes grading scale Pass/ Fail. Second test utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

University teacher Annina Sipola

Working life cooperation:

-

091721A: Oral Surgery I, 4 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Leena Ylikontiola, György Sandor, Petri Iso-Kungas

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

4 ECTS credits

Language of instruction:

Finnish

Timing:

3rd year Autumn/Spring term, Subject studies

Learning outcomes:

At the completion of this course the student should be able to perform anamnesis and examination of a surgical patient. He/she should be aware of the risks of general diseases and medication to surgical treatment. The student

should perform independently conventional local anaesthetic measures and should be able to perform tooth extractions.

- To teach how to examine the oral surgical patient and do the anamnesis
- To study the essentials of general diseases and medication of the patients
- Theoretical and practical teaching -to learn to give local anesthetics
- To learn to do uncomplicated tooth extractions

Contents:

- Theoretical and practical teaching how to examine the patient
- Theoretical and practical teaching in local anesthetic
- Theoretical and practical teaching in aseptics
- Theoretical and practical teaching in tooth extractions
- Theoretical and practical teaching in suturing technique

Mode of delivery:

Lectures, practical exercises, seminars/small groups, individual studies

Learning activities and teaching methods:

Lectures, practical exercises, seminars/small groups, individual studies

Target group:

3rd year dental students

Prerequisites and co-requisites:

Written entrance exam to get into the course

Recommended or required reading:

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. Mosby, latest edition

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Petri Iso-Kungas, Professor György Sandor

Working life cooperation:

Includes supervised practical clinical training

Other information:

Accepted course is a prerequisite for clinical studies in Oral and Maxillofacial Surgery

A540232: Orthodontics I, 6 - 7 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Study module

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

7 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year

Learning outcomes:

The student is able to estimate the incidence and implication of abnormal occlusion. He is able to make a diagnosis on most common occlusal abnormalities and is able to define the degree of difficulty and the demand of treatment. The student knows the protocol and methods of orthodontic examination and uses radiology in diagnosis. He is able to consider the function in orthodontic treatment need evaluation. He understands the options for treatment methods and the importance of timing in treatment. The student is able to make most common orthodontic appliances and understands the overall care and advice for the patient. He knows the orthodontic first aid.

Contents:

091794A Diagnostics in Orthodontics (1 credit):

Basics in clinical orthodontics and documentation.

091795A Basic Orthodontic Skills (6 credits):

Orthodontic equipment and materials will be introduced. Practical exercises individually and in pairs and teaching videos will instruct the basics of patient care in Orthodontics.

Part 1 (2.7 ECTS cr):

The basic concepts in orthodontics and documentation for the orthodontic treatment planning; understand the possibilities of treatment methods in different stages of the developing dentition; treatment methods, appliances and mechanics in preference to growth guidance; basic knowledge to make the diagnosis, treatment planning and timing in orthodontic treatment. Patient information to clarify home care in Orthodontics. Orthodontic examination including anamnesis, occlusal status, biologic developmental stage of the dentition, occlusal function, cephalometric analysis (manual and digital), photography of the face and dentition and making dental casts including alginate copy and wax index of the dentition as well hands-on scanning dentition and occlusion for 3D-models.

Part 2 (2 ECTS cr):

Treatment possibilities of all kind of occlusal problems especially in the mixed dentition. The mechanics of expanding appliances and how to mount orthodontic band, extraoral traction, early cross-bite treatment, interceptive slicing in crowding and collaboration with technical laboratory.

Part 3 (1.3 ECTS cr):

Biomechanics and reactions in bone and teeth due to moving teeth in Orthodontics. How to make Orthodontic appliances will be introduced e.g., brackets, arch wire and how to fix them, remove fixed appliances and how to make retention appliances and fix them. The student learns to bend an ideal orthodontic arch wire and retention wire. Oral hygiene and first aid in Orthodontics. 3D-imaging in Orthodontics and technical steps in making the retention plate (demo).

Mode of delivery:

Lectures, seminars, hand-on course, demonstrations

Learning activities and teaching methods:

Diagnostics in Orthodontics (20h)

- lectures and teamwork
- multiple choice exam

Basic Orthodontic Skills

Part 1 (2.6 ECTS credits): lectures/demo, video, practicals individual/in pairs/self-learning

Part 2 (1.9 ECTS credits): lectures/demo, video, independent practicals

Written essay examination 2 h (parts 1 and 2)

Part 3 (1.2 ECTS credits): lectures/demo, video, practicals individual/in pairs

Target group:

3rd year dental students

Prerequisites and co-requisites:

Obligatory 1. to 2nd year studies and 3rd year autumn studies.

Recommended optional programme components:

Oral Development and Orthodontics

Basic knowledge and skills in dentistry

Grading:

Pass/fail in hands-on course, Essay examination 1-5

Person responsible:

Professor Pertti Pirttiniemi and adjunct professor Raija Lähdesmäki

Working life cooperation:

Practicals are carried partly in The Teaching Clinic.

Compulsory

091794A: Diagnostics in Orthodontics, 1 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS cr, part of A540232 Orthodontics I (7 ECTS credits)

Language of instruction:

Finnish

Timing:

3rd year. Preclinical studies must be completed before the course.

Learning outcomes:

The student is able to evaluate and diagnose the most common malocclusion on population level and the importance of malocclusions.

The student can make the difference between mild and severe malocclusions.

The student is competent to use the most common diagnostic tools and documentation methods to screen malocclusions.

The student can evaluate the functional factors of occlusion, related to malocclusion.

The student understands the referring system and comprehensive care, related to the treatment of malocclusions.

Contents:

Normal occlusion

Malocclusion

Epidemiology of malocclusions

Characteristics of malocclusions

Diagnostic tools in orthodontics

Emergence timetables of teeth

Occlusion examination on dental casts

Imaging in orthodontics

General growth and orthodontics

Functional issues related to orthodontic patient examination

Extrinsic factor related to the emergency of orthodontic problems

Mode of delivery:

Face to face

Learning activities and teaching methods:

During the lectures and seminars the prevalence of orthodontic problems and the diagnostics are handled.

In the seminars the diagnostics is trained in practical sessions.

The documentation and imaging are handled in relation t orthodontics.

Especially the importance of growth and development and the emergency timetable of dentition is reflected to orthodontic diagnostics.

Target group:

Students in Dentistry 3rd year

Prerequisites and co-requisites:

Clinical Training

Recommended optional programme components:

Oral Development and Orthodontics:

090171A-01 Introduction to Development of Occlusion and Orthodontics (0.5 Credit)

A540232 Orthodontics I including:

- 091794A Diagnostics in Orthodontics (1 Credits) and
- 091795A Basic Orthodontic Skills (6 Credits)

091772S Orthodontics III including:

- 091772S-01 ORTHO-Seminars 1-5 (1.5 credit)
- 091772S-02 Pathology in occlusal development and adult orthodontics (0.5 credit)

090177A-06 Abnormal eruption patterns of permanent teeth 2 h

Lessions in Implantology and facial pain seminars.

Recommended or required reading:

Review of the theoretical and practicing materials in Orthodontics, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

In clinical practice OukaOpa app is used for self-assessment in Orthodontics based on national competences, clinical teachers will comment.

Grading:

Pass/fail

Person responsible:

Professor Pertti Pirttiniemi
 Programme manager Raija Lähdesmäki

Working life cooperation:

Clinical practice is supervised patient work in Orthodontic field of clinical Dentistry, mainly growing patients and following special care treatment in the University hospital in Orthodontic field.

Other information:

091792A Dental hygienist students also participate in the Diagnostics in Orthodontics (1 Credits) course.

091795A: Basic Orthodontic Skills, 5 - 6 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

6 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year, Autumn - Spring term. The preclinical studies have to be passed before the course.

Learning outcomes:

The student is able to estimate the incidence and implication of abnormal occlusion. He is able to make a diagnosis on most common occlusal abnormalities and is able to define the degree of difficulty and the demand of treatment. The student knows the protocol and methods of orthodontic examination and uses radiology in diagnosis. He is able to consider the function in orthodontic treatment need evaluation. He understands the options for treatment methods and the importance of timing in treatment. The student is able to make most common orthodontic appliances and understands the overall care and advice for the patient. He knows the orthodontic first aid.

Contents:

Orthodontic equipment and materials will be introduced. Practical exercises individually and in pairs and teaching videos will instruct the basics of patient care in Orthodontics.

Part 1 (3.7 ECTS cr):

The basic concepts in orthodontics and documentation for the orthodontic treatment planning; understand the possibilities of treatment methods in different stages of the developing dentition; treatment methods, appliances and mechanics in preference to growth guidance; basic knowledge to make the diagnosis, treatment planning and timing in orthodontic treatment. Patient information to clarify home care in Orthodontics. Orthodontic examination including anamnesis, occlusal status, biologic developmental stage of the dentition, occlusal function, cephalometric analysis, photography of the face and dentition and making dental casts including alginate copy and wax index of the dentition as well scanning dentition and occlusion for 3D-model option.

Part 2 (2 ECTS cr):

Treatment possibilities of all kind of occlusal problems especially in the mixed dentition. The mechanics of expanding appliances and how to mount orthodontic band, extraoral traction, early cross-bite treatment, interceptive slicing in crowding and collaboration with technical laboratory.

Part 3 (1.3 ECTS cr):

Biomechanics and reactions in bone and teeth due to moving teeth in Orthodontics. How to make Orthodontic appliances will be introduced e.g., brackets, arch wire and how to fix them, remove fixed appliances and how to make retention appliances and fix them. The student learns to bend an ideal orthodontic arch wire and retention wire. Oral hygiene and first aid in Orthodontics. 3D-imaging in Orthodontics and technical steps in making the retention plate (demo).

Mode of delivery:

Lectures, seminars, hand-on course, demonstrations

Learning activities and teaching methods:

Part 1 (2.7 ECTS credits): lectures / demo, video, practicals individual/in pairs / self-learning / assessment (multiple choice 0.5 h)

Part 2 (2.0 ECTS credits): lectures / demo, video, independent practicals

Written essay examination 2 h (parts 1 and 2)

Part 3 (1.3 ECTS credits): lectures / demo, video, practicals individual/in pairs

Target group:

3rd year dental students

Prerequisites and co-requisites:

All DC4 studies, all obligatory studies

Recommended optional programme components:

Oral Development and Orthodontics

Recommended or required reading:

Part 1: Orthodontic examination carbon copy, basic mechanics in Orthodontics I and II, cephalometrics I and II, lecture hand-outs, photography in patient documentation (video), alginate copy and wax index, referral to technical laboratory (video) (all in Finnish).

Part 2: lecture hand-outs, videos how to fix orthodontic ring, extraoral traction (all in Finnish).

An Introduction to Orthodontics 5th ed. Littlewood, Mitchell 2019 (chapters 1-3, 5-14, 25)

Pediatric dentistry. A clinical approach. 2 nd ed. by G. Koch, S. Poulsen, 2009, chapter 16 (Occlusal development, preventive, and interceptive orthodontics)

Part 3: lecture hand-outs, videos how to make fixed and retention appliances

An Introduction to Orthodontics 5th ed. Littlewood, Mitchell 2019 (chapters 15-18, 21, 25)

Assessment methods and criteria:

Part 1: Mandatory attending in lectures, hand-on course, group works

Part 2: Mandatory attending in lectures, hand-on course, group works

Passing of essay examination (parts 1 and 2)

Part 3: Mandatory attending in lectures, hand-on course, group works and active participation in demos

Read more about assessment criteria at the University of Oulu webpage.

Grading:

Pass/fail in hands-on course, Essay examination 1-5

Person responsible:

Professor Pertti Pirttiniemi and Raija Lähdesmäki, Adjunct professor

Working life cooperation:

Yes

Other information:

Basic Skills in Orthodontics-course, parts 1 and 2 is term of admission to start work in Orthodontics (orthodontic documentation, treatment plan).

Part 3 has to be passed before taking care of other orthodontic patients and participation in orthodontic clinic.

The course is included in the final examination of oral development and orthodontics.

091772S: Orthodontics III, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS Credits

Language of instruction:

Finnish

Timing:

5th study year, Autumn term

Contents:

This study module contains:

091772S-01 ORTHO-Seminars 1-5 (1.5 credit)

091772S-02 Pathology in occlusal development and adult orthodontics (0.5 credit)

For descriptions, see each course separately

Target group:

4th and 5th year students in Dentistry

Recommended optional programme components:

Part of the Basic knowledge and skills in dentistry

Person responsible:

Professor Pertti Pirttiniemi and adjunct professor Raija Lähdesmäki

Compulsory

091772S-02: Pathology in occlusal development and adult orthodontics, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 2 ECTS cr study module, correspondents to 0.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

5th year, Autumn term

Learning outcomes:

To be able to make diagnosis of malocclusions in adult patients, to send the case to the orthodontist, to be familiar with the risks of treatment and nontreatment.

Contents:

Pathology in occlusal development and basic items of adult orthodontics

Mode of delivery:

Lectures 6 hours

Learning activities and teaching methods:

Lectures 6 hours

Target group:

All 5th year dental students

Prerequisites and co-requisites:

Earlier courses in orthodontics and terminology, before final exam in Orthodontics

Recommended optional programme components:

Oral rehabilitation

Oral Development and Orthodontics

Recommended or required reading:

Lecture hand-outs

Littlewood and Mitchell: An Introduction to Orthodontics, chapters 20-22, 5th Edition, Oxford

Assessment methods and criteria:

Lectures

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Pass/failed

Person responsible:

Senior Lecturer Tuomo Heikkinen and professor Pertti Pirttiniemi

Working life cooperation:

No

Other information:

Course is included in the final exam in Orthodontics

091772S-01: ORTHO-Seminars 1-5, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

1.5 ECTS credits / 40.5 hours of work

Language of instruction:

Finnish

Timing:

The course unit is held in five half day seminars:
Seminar 1 is held in the autumn semester, 4th year
Seminars 2 and 3 are held in the spring semester, 4th year
Seminar 4 is held in the autumn semester, 5th year
Seminar 5 is held in the spring semester, 5th year

Learning outcomes:

After the seminar student is capable to assess the meaning of the variation of the occlusion and the screening of the treatment need. He can assess between different treatment options and in that the timing of treatment. Student is able to look for new knowledge and assess it critically.

Contents:

Tutorial teaching deepens the knowledge of the variation and treatment options of abnormal occlusion by student's seminar presentations of the treatment goals, procedures and result with their orthodontic patients (DC7-1, DC8-3, DC10-5). In a theoretical seminar student makes presentations of given methods and timing on the treatment of abnormal occlusion (DC8-2, DC9-4). After each seminar (1-5) student gives a structured reflection of the learning experience in learning environment and gets written tutorial feed-back and the score.

Mode of delivery:

The delivery for the course unit is blended teaching (independent learning + face-to-face teaching + web-based learning and teaching)

Learning activities and teaching methods:

Independently prepared presentation (software e.g. Power Point) to the Seminar 1-5 (á 4.5 hours), patient and theoretical seminar presentations in the given group (1-5, á 4 x 45 min), active discussion and given reflection in learning environment after the seminar (1-5, á 0.5 hours).

Target group:

4th and 5th study year (DC7-DC10), to deepen the knowledge in Orthodontic treatment

Prerequisites and co-requisites:

This course is part of 091772S Orthodontics III (2 ECTS credits). 091771A Orthodontics I has to be passed before entering the course.

Recommended or required reading:

The documentation of the orthodontic patients in clinical teaching. Independent work with references from Medline and PubMed to make a presentation for the theoretical seminars at an appointed title.

Assessment methods and criteria:

Self-made presentation in seminar (1-5) and active discussion. After the seminar structured reflection in learning environment. The teacher gives written comments and the score for each seminar (1-5).

Each seminar is separate entity, the order is advisory.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail. All the seminars 1-5 will be assessed numerically and the final score is the mean in the scale 1-5.

Each seminar 1-5 must be passed independently.

Person responsible:

Adjunct professor Raija Lähdesmäki and professor Pertti Pirttiniemi

Working life cooperation:

The course unit in the 1st 3rd and 5th seminar utilizes patients from Oulu City Teaching Clinic. Student uses patient records and takes care of the permission of the guardian for the presentation.

Other information:

The strand of the Basic Skills in Dentistry.

Independent course unit in 091772S Orthodontics III (2 ECTS credits).

Credits of this course are included in the final degree in Orthodontics.

091751A: Periodontology I, 5 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pernu, Hilikka Elina, Pekka Ylöstalo

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year, Autumn term

Learning outcomes:

To reach basic knowledge and skills to give periodontal therapy

Contents:

Anatomy and physiology of periodontium, aetiology and basic pathology of gingivitis and chronic periodontitis. Classification of clinical phenotypes concerning chronic gingivitis and periodontitis. Hygienic phase periodontal treatment.

Basics in periodontology and periodontal treatment, part 1, 2,5 ECTS credits:

Lectures: Anatomy and physiology of periodontium, aetiology and basic pathology of gingivitis and chronic periodontitis.

Basics in periodontology and periodontal treatment, part 2, 2,5 ECTS credits:

Clinical examination and diagnosis of gingivitis and periodontitis. Evaluation of prognosis and treatment plan. Oral hygiene and plaque control agents. Periodontal hand instruments ja instrumentation.

Mode of delivery:

Lectures, practical exercises, individual studies

Learning activities and teaching methods:

Lectures, practical exercises, individual studies

Target group:

3rd year dental students

Prerequisites and co-requisites:

To pass the entrance examination

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W. B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Assessment methods and criteria:

Written course examination

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Pekka Ylöstalo

Senior Lecturer Hilikka Pernu

Working life cooperation:

Yes

Other information:

Previously course: Basics in periodontology and periodontal treatment

091751S: Periodontology II, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pernu, Hilikka Elina

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits

Language of instruction:

Finnish

Timing:

3rd year, Spring term

Learning outcomes:

To give additional knowledge and skills for nonsurgical periodontal therapy

Contents:

Classification of periodontal diseases and periodontal case definitions. Individual and population based preventive periodontal therapy; Clinical microbiology and antibiotics in periodontal therapy. Treatment of deep periodontal pockets, furcation lesions; Epidemiology and risk factors of periodontal diseases. Acute gingival and periodontal diseases. Ultrasonic and airpressure devices in periodontal treatment.

Mode of delivery:

Lectures, phantom and simulation practice, seminars/small groups, individual studies

Learning activities and teaching methods:

Lectures, seminars/small groups, individual studies

Target group:

3rd year dental students

Prerequisites and co-requisites:

Previous courses in periodontology

Recommended optional programme components:

-

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W. B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Assessment methods and criteria:

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Scale 0-5 or pass/fail. In the numerical scale zero stands for a fail.

Person responsible:

Senior lecturer Hilikka Pernu

Professor Pekka Ylöstalo

Working life cooperation:

No

Other information:

Previous course name: Special Topics in Nonsurgical Periodontal Therapy

091506S: Radiation Safety in Dentistry, 0,5 - 0,6 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Annina Sipola

Opintokohteen kielet: Finnish

ECTS Credits:

0,5 ECTS credits

Language of instruction:

Finnish

Timing:

The course is held during 4th year

Learning outcomes:

Upon completion of the course, the student: knows appropriate radiation safety requirements and guidelines. Knows how to arrange quality assurance procedures for dental X-ray appliances (intraoral and panoramic tomography X-ray equipment and the cephalostats associated with these). Student understands that the use of radiation is monitored to ensure the radiation exposure of patients and staff is as low as possible.

Contents:

Upon completion of the course, the student: knows appropriate radiation safety requirements and guidelines. Knows how to arrange quality assurance procedures for dental X-ray appliances (intraoral and panoramic tomography X-ray equipment and the cephalostats associated with these). Student understands that the use of radiation is monitored to ensure the radiation exposure of patients and staff is as low as possible.

Mode of delivery:

Face-to-face teaching

Moodle

Learning activities and teaching methods:

Face-to-face teaching

Moodle

Target group:

4th year dental students

Recommended or required reading:

White, Pharaoh; Oral Radiology: Principles and Interpretation, materials published by STUK Radiation and Nuclear Safety Authority in Finland.

Assessment methods and criteria:

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Pass / fail

Person responsible:

University teacher Annina Sipola

Other information:

The course is statutory radiation protection education in dentist training.

091731A: Stomatognathic Physiology I (orthofunction), 3 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kirsi Sipilä

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS credits

Language of instruction:

Finnish

Timing:

2nd year, Autumn/Spring term

Contents:

Bony structure of the masticatory system; macro- and microanatomy of temporomandibular joint; structure and function of the masticatory muscles, function of the mandible, registration of the occlusion, examination of a patient.

Mode of delivery:

Lectures, self-access learning, clinical training

Learning activities and teaching methods:

Lectures, self-access learning, clinical training

Target group:

2nd year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

-

Recommended or required reading:

lecture handout material,

Okeson JP. Management of temporomandibular disorders and occlusion 7 ed. Elsevier Mosby 2013, pages 1-99

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Scale 0-5

Person responsible:

Professor Kirsi Sipilä, Senior Lecturer Ritva Näpänkangas

Working life cooperation:

-

Other information:

-

091714S: Cariology III, 2 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Tarja Tanner, Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year, spring term, 5th study year autumn term

Learning outcomes:

Upon completion the course, the student will be able to

- diagnose non-microbial diseases of the teeth
- make a treatment plan for non-microbial diseases of the teeth
- understand causal caries diagnostics

Contents:

Attrition abrasion, and erosive tooth wear, hyposalivation, mineralisation disorders of teeth , other current topics

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Lectures and hands-on exercises, total of 54 hours work for student (=2 ECTS cr)

Target group:

4th and 5th year dental students

Recommended optional programme components:

Obligatory for all dental students

Recommended or required reading:

Material given during the course

Fejerskov O, Kidd E. Dental Caries. The Disease and its Management. 2nd Ed. 2008

- Part III Dental caries in a biological context

o Chapter 13 Erosion of the teeth, ss. 234-246 (13 s.)

OR

Meyer-Lueckel H, Paris S, Ekstrand K. Caries management – Science and Clinical Practice. 2013 Georg Thieme Verlag KG. Stuttgart, Saksa.

o Chapter 8: Descriptive Epidemiology of Caries and Noncarious Defects: Indices for noncarious defects, s.124 JA Occurrence and Distribution of Noncarious Defects: Acquired Defects of Enamel and Dentin s.130

o Chapters 24-25: Diagnostics, treatment decision and documentation AND Minimal interventional treatment of caries in the permanent dentition: clinical cases; s. 333-371.

Voluntarily:

Sreebny L, Vissink A. Dry mouth, the malevolent symptom a clinical guide. 2010, Wiley-Blackwell, USA <https://www.dawsonera.com/abstract/9780813820972>

Lussi A, Ganss C. Erosive tooth wear - from diagnosis to therapy. 2014 Monographs in oral science vol. 25. Karger publishers, Saksa.

Assessment methods and criteria:

Includes to final exam of the discipline

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Includes to final exam of the discipline

Person responsible:

DOS, EHL Marja-Liisa Laitala, HLT Tarja Tanner

Other information:

Part of Oral diseases and overall health strand

091791A: Diseases of Oral Mucosa, 3 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Salo, Tuula Anneli

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS credits

Language of instruction:

Lectures in Finnish; research projects also in English

Timing:

4th year, Spring term, Subject studies

Learning outcomes:

As general requirements for all dentist is the basic knowledge about the anatomical and histological structures of oral mucosa. The student will know variations in the normal structures of the oral mucosa and is able to diagnose and treat the oral mucosal diseases.

Contents:

Anamnestic and clinical examination of patients with oral mucosal diseases including practise of biopsies.

Aetiopathogenesis and relationship of oral mucosal diseases with general diseases (including e.g. dermatological and sexually transmitted diseases and HIV-infection). Treatment and follow-up of oral mucosal disease patient in health care. The clinical and pathological manifestations of the following conditions: oral mucosal vesiculo-bullous, ulcerative, white, red-blue, pigmented, verrucous and connective tissue lesions premalignant lesions and conditions and oral cancer. Special features related to burning mouth and Sjögren's syndromes.

Mode of delivery:

Lectures and seminars

Learning activities and teaching methods:

Lectures and seminars

Target group:

4th year dental students

Prerequisites and co-requisites:

All preclinical dental studies are prerequisites for this course

Recommended optional programme components:

091791S Oral Pathology

Recommended or required reading:

Study material; selected portions:

Regezi JA, Sciubba J, Jordan RCK. Textbook: *Oral & Maxillofacial Pathology: Clinical-Pathologic Correlations. 7th edition. WB Saunders Co.*, Philadelphia, PA, 2008

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Tuula Salo

Working life cooperation:

Clinical work in the Department of Diagnostics and Oral Medicine

Other information:

To obtain clinical work in the Department of Diagnostics and Oral Medicine the course of Diseases of Oral Mucosa has to be completed.

091756A: Geriatric Dentistry, 3 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Syrjälä, Anna-Maija Hannele

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS credits

Language of instruction:

Finnish

Timing:

The course is held in the fourth spring and fifth autumn semester.

Learning outcomes:

Upon completion of the course the student knows general traits related to aging and special features of dental diseases and dental treatment among the older people. The student is able to notice oral changes related to aging, to diagnose oral diseases of the older people, to take account the functional ability and frailty of the older people in planning and performing dental care, to take account the effect of aging on the medical treatment of the older people and to manage principles of oral palliative care.

Contents:

Lectures (Department of Periodontology and Geriatric Dentistry):

- Theories of aging
- Demography
- Factors related to biological aging
- Use of drugs in old age
- Diseases in old age
- Changes in healing and immunological response
- Oral changes in old age
- Epidemiology of oral diseases in old age
- Problems in oral health in old age
- Prevention of oral diseases

- Dental treatment plan in old age
- Dental care of disabled people
- Specific traits in dental care in aged people
- Geriatric pharmacology in dentistry
- Complications in dental care
- Oral palliative care

Theme day of lectures:

- Restorative treatment and prevention of dental caries among older patients (Department of Pedodontics, Cariology and Endodontics)
- Prosthodontic treatment of older patients (Department of Prosthetic Dentistry and Stomatognathic Physiology)
- Periodontal treatment of older patients (Department of Periodontology and Geriatric Dentistry)
- Radiographic features among older patients (Department of Diagnostics and Oral Medicine)
- Quality of life related to oral health among older people (Department of Community Dentistry)
- Surgical treatment of older patient (Department of Oral Surgery)
- Oral mucosal diseases of the older people (Department of Diagnostics and Oral Medicine)

Participation to the teaching of geriatry in Medicine: lectures/theme day

Mode of delivery:

The tuition will be implemented as face-to-face teaching and group working. The tuition includes also visits to sheltered home and nursing home, where dental students make oral clinical examinations to older people. Tuition include also preparing a portfolio / passing an exam.

Book Geriatric Dentistry, the newest edition, applicable content

Learning activities and teaching methods:

Face-to-face teaching, theme days, group working, study-group working to prepare learning diary/learning portfolio, Lectures 30 hours, group working

Working time for student 81 hours =3 ECTS

Target group:

4th - 5th year dental students

Prerequisites and co-requisites:

It is recommended to complete prior courses of dentistry

Recommended optional programme components:

There are no parallel courses to be performed

Recommended or required reading:

Lecture hand outs, material on Moodle, internet sources (Terveysportti)

Book Geriatric Dentistry, the newest edition, applicable content

Assessment methods and criteria:

The course unit is completed by participation in lectures of geriatric dentistry and geriatry, visiting the sheltered home and nursing home, participating on group-working and making a learning portfolio/passing the exam.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading pass/fail or passing the exam

Person responsible:

University researcher Anna-Maija Syrjälä

Post doctoral researcher Antti Tiisanoja

Working life cooperation:

Working life cooperation includes training in sheltered home and nursing home. This training is included in clinical work in dental training clinic.

090173S: Medical Specialities I, 1 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Syrjälä, Anna-Maija Hannele

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS Credits

Language of instruction:

Finnish

Timing:

4th study year, spring

Contents:

This study module contains:

090173S-01 Dermatology and Venereology (0.5 ECTS Credits)

090173S-02 Otorhinolaryngology (0.5 ECTS Credits)

For descriptions, see each course separately

*Compulsory***090173S-01: Dermatology and Venereology, 0 op****Voimassaolo:** 01.08.2017 -**Opiskelumuoto:** Advanced Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Kaisa Tasanen-Määttä, Syrjälä, Anna-Maija Hannele**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS cr (part of 1 ECTS cr study module, corresponds to 0.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th study year, Spring

Learning outcomes:

After the course the student is able to recognize the most common dermatological and venereological diseases relating to oral and dental diseases. He is able to adapt his work and/or redirect the patient to appropriate care.

Contents:

Recognize the most common dermatological and venereological diseases, diagnostic methods in allergology

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures (6 hours)

Target group:

4th year dental students

Prerequisites and co-requisites:

no

Recommended optional programme components:

Oral diseases and health strand

Recommended or required reading:

Active participation in teaching and hand-out materials

Assessment methods and criteria:

Written examination or obligation to 100% attendance in teaching

Read more about [assessment criteria](#) at the University of Oulu webpage.**Grading:**

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor Kaisa Tasanen-Määttä

Working life cooperation:

No

Other information:

-

090173S-02: Otorhinolaryngology, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Alho, Olli-Pekka, Aleksi Laajala, Syrjälä, Anna-Maija Hannele

Opintokohteen kielet: Finnish

ECTS Credits:

0.5 ECTS credits / 12 hours of work

Language of instruction:

Finnish

Timing:

The course is held in the 4th year spring semester

Learning outcomes:

Learning outcome is to familiarize student to ear, nose and throat diseases as specialty in the field of medicine. Upon completion of the course, student will be able to evaluate ear, nose and throat diseases from a dental medicine's perspective.

Contents:

The basic contents of the course are diseases of ear, nose, mouth, pharynx, larynx, salivary glands, facial and neck area and their epidemiology, diagnostics and treatment.

Mode of delivery:

Face-to-face teaching and web-based teaching in Moodle learning environment

Learning activities and teaching methods:

Lectures 6h

Web-based learning diary and refresher course 6h

Target group:

4th year dental students

Prerequisites and co-requisites:

None

Recommended optional programme components:

Oral Diseases and Health Strand

Recommended or required reading:

Material from the lectures

Assessment methods and criteria:

Attendance in lectures is obligatory. Web-based rehearsal course / learning journal
Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course utilizes verbal grading scale Pass/Fail

Person responsible:

Professori Olli-Pekka Alho

Yliopisto-opettaja Aleksi Laajala

Working life cooperation:

The course does not contain working life cooperation

Other information:

-

090174S: Medical Specialities II, 5 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Syrjälä, Anna-Maija Hannele

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS Credits

Language of instruction:

Finnish

Timing:

5th study year, Autumn

Contents:

This study module contains:

090174S-01 Internal Medicine for Dental Students (0.8 ECTS Credits)

090174S-02 Clinical microbiology (2.1 ECTS Credits)

090174S-03 Neurology (0.4 ECTS Credits)

090174S-04 Clinical Pharmacology (1.0 ECTS Credits)

090174S-05 Psychiatry (0.4 ECTS Credits)

090174S-06 Forensic Dentistry (0.3 ECTS Credits)

For descriptions, see each course separately

Target group:

5th year students of Degree Programme in Dentistry

Recommended optional programme components:

Part of the strand of the Oral diseases and overall health

Compulsory

090174S-01: Internal Medicine for Dental Students, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Olavi Ukkola

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS Credits (part of 5 ECTS cr study module, correspondent to 0.8 ECTS cr workload)

Language of instruction:

Finnish

Timing:

5th year Autumn term

Target group:

5th year dental students

Recommended optional programme components:

-

Recommended or required reading:

Vauhkonen I, Holmström P: Sisätaudit. (4. painos, 2012), Sanoma pro
 Heikkilä J, Mäkijärvi M. EKG (2003), Kustannus Oy Duodecim
 Heikkilä J, Kupari M, Airaksinen J, Huikuri H, Nieminen MS, Peuhkurinen K. Kardiologia (2008), Kustannus Oy Duodecim
 Mäkijärvi M, Parikka H, Raatikainen P, Heikkilä J. EKG-tulkinnan työkirja (2006), Kustannus Oy Duodecim
 Huovinen P, Hedman K, Heikkinen T, Järvinen A, Meri S, Vaara M. (toim.): Mikrobiologia – Mikrobiologia, immunologia ja infektiosairaudet, kirja 1 (1.-2. painos, 2011), Kustannus Oy Duodecim
 Hedman K, Heikkinen T, Huovinen P, Järvinen A, Meri S, Vaara M. (toim.): Immunologia – Mikrobiologia, immunologia ja infektiosairaudet, kirja 2 (2011), Kustannus Oy Duodecim
 Hedman K, Heikkinen T, Huovinen P, Järvinen A, Meri S, Vaara M. (toim.): Infektiosairaudet – Mikrobiologia, immunologia ja infektiosairaudet, kirja 3 (2011), Kustannus Oy Duodecim
 Pasternack, A (toim.): Nefrologia (2012), Kustannus Oy Duodecim
 Höckerstedt K, Färkkilä M, Kivilaakso E, Pikkarainen P. Gastroenterologia ja hepatologia (2007), Kustannus Oy Duodecim
 Kaarteenaho R., Brander P., Halme M., Kinnula V (toim.): Keuhkosairaudet – diagnostiikka ja hoito (2013), Kustannus Oy Duodecim
 Koskenvuo K. (toim.): Sairauksien ehkäisy (2003), Kustannus Oy Duodecim
 Martio J., Karjalainen A., Kauppi M., Kukkurainen M-L., Kyngäs H.: Reuma (2007), Kustannus Oy Duodecim
 Ruutu T, Rajamäki A, Lassila R, Porkka K. Veritaudit (2007), Kustannus Oy Duodecim
 Välimäki M, Sane T, Dunkel L.: Endokrinologia (2. painos, 2009) Kustannus Oy Duodecim
 Thaler M. The only EKG book you'll ever need. 4th ed (2003). Lippincott Williams & Wilkins

Assessment methods and criteria:

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor Olavi Ukkola

Working life cooperation:

No

Other information:

-

090174S-02: Clinical microbiology, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Syrjälä, Anna-Maija Hannele

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits

Language of instruction:

Finnish

Timing:

The course is held in the fifth autumn semester

Learning outcomes:

Upon completion of the course the student knows infectious diseases linked to dentistry, their diagnosis and treatment, and give readiness to study infectious diseases independently.

Contents:

Lectures of common infectious diseases linked to dentistry, their diagnosis and treatment.

Mode of delivery:

The tuition will be implemented as face-to-face teaching.

Learning activities and teaching methods:

Face-to-face teaching

Target group:

5th year dental students

Prerequisites and co-requisites:

It is recommended to complete prior courses of dentistry

Recommended optional programme components:

Oral diseases and health-line

Part of the course of Medical Specialities II

Recommended or required reading:

Lecture hand-outs, articles

Assessment methods and criteria:

The course unit is completed by participation in lectures linked to dentistry and passing the Socratic exam. Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading pass/fail the Socratic exam

Person responsible:

Professor Olavi Ukkola

University researcher Anna-Maija Syrjälä

Working life cooperation:

No

Other information:

-

090174S-03: Neurology, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kärppä, Mikko Sakari

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 3 ECTS cr study module, correspondents to 0.4 ECTS credits workload)

Language of instruction:

Finnish

Timing:

DC9, Advanced studies

Learning outcomes:

After the course the student has knowledge on the background and more brief examination need for the neurological symptoms of the cranial nerves and head. Student is able to consult neurologist and take into account special features with the neurological patients in dentistry.

Contents:

Examination of the neurological patient, neurological patient in dental office, headache, sleep disorders and most common neurological diseases

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures (6 hours)

Target group:

5th year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

Oral diseases and health strand

Recommended or required reading:

Active participation in teaching and hand-out materials

Assessment methods and criteria:

Obligation to 100% attendance in teaching (substitutive written essay)

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail

Person responsible:

Clinical teacher Mikko Kärppä

Working life cooperation:

No

Other information:

-

090174S-04: Clinical Pharmacology, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

The course is held in the autumn semester. It is recommended to complete the course at the 5th autumn semester.

Learning outcomes:

After passing the course the student should have ability to safe, efficient and cost effective drug therapy. The student should understand the basis for drug therapy from the point of view of dentist.

Contents:

Factors affecting drug selection, dosage and therapy will be discussed applying knowledge of basic pharmacology. Furthermore, the common problem cases of drug therapy will be discussed. Use of major classes of drugs and special treatment situations will also be discussed.

Mode of delivery:

The tuition will be arranged as face-to-face teaching.

Learning activities and teaching methods:

Lectures 10 hours, clinical pharmacology patient case discussions in study groups 2 h, self-study 15 h.

Target group:

Target group is dentistry students.

Prerequisites and co-requisites:

The required prerequisite is the completion of the following courses prior to enrolling for the course unit: Pharmacology and toxicology

Recommended optional programme components:

The course is an independent entity and does not require additional studies carried out at the same time. No alternative courses.

Recommended or required reading:

Book: Neuvonen, Backman, Himberg, Huupponen, Keränen, Kivistö (eds.) Kliininen farmakologia ja lääkehoito, Kandidaatikustannus Oy (last edition). Materials of the lectures.

Assessment methods and criteria:

Attending all lectures and the patient case discussion group or attending the patient case discussion group and final exam.

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course utilizes verbal grading scale pass/fail

Person responsible:

Miia Turpeinen

Working life cooperation:

No

090174S-05: Psychiatry, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Veijola, Juha Martti

Opintokohteen kielet: Finnish

ECTS Credits:

Correspondents to 0.4 ECTS cr workload

Language of instruction:

Finnish

Timing:

DC9, Advanced studies

Learning outcomes:

Aim of the course is that a student knows special features of the psychiatric patients, young people and addicts. A student is able to find the proper approach and treatment decisions based on psychiatric patients, and patients with alcohol and drug abuse problems. In addition, a student knows the psychological meaning of the oro-dental environment.

Contents:

Most common psychiatric diseases, aetiology, treatment and medication and significance in dentistry. Also, facing a psychiatric patient and young people, patients with alcohol and drug abuse problems.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures (6 hours)

Target group:

5th year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

Oral diseases and health strand

Recommended or required reading:

Active participation in teaching and hand-out materials

Assessment methods and criteria:

Obligation to 100% attendance in teaching

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail

Person responsible:

Professor Juha Veijola and Clinical teacher Anu-Helmi Halt

Working life cooperation:

no

Other information:

-

090174S-06: Forensic Dentistry, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala, Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 090174S Medical Specialities II (5 ECTS cr) study module, corresponds to 0.3 ECTS cr workload

Language of instruction:

Finnish

Timing:

5th study year

Learning outcomes:

Upon completion of the course, the student will be able to get acquainted with forensic dentistry.

Contents:

Basics of forensic dentistry

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Lectures, total of 8 hours work for student (= 0.3 ECTS cr)

Target group:

Dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

No

Recommended or required reading:

Material is given during the course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Raija Lähdesmäki

PhD, DDS Marja-Liisa Laitala

Working life cooperation:

No

Other information:

-

091823S: Oral and Maxillofacial Surgery V, 3 op

Voimassaolo: 01.08.2020 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: György Sandor, Leena Ylikontiola, Petri Iso-Kungas

Opintokohteen kielet: Finnish

ECTS Credits:

4 ECTS credits

Language of instruction:

Finnish

Timing:

5th year Autumn term, Advanced studies

Learning outcomes:

To deepen the student's understanding about general diseases, to give him/her the basics of treating oral cancer and sleep apnea, bring out the special features required in treating patients under radiation and chemotherapeutic treatment

Contents:

General diseases in regards of oral surgery, treatment of a patient under radiation therapy, treatment of a patient under chemotherapeutics, treatment of oral cancer, diagnosis and treatment of sleep apnea

Mode of delivery:

Lectures, individual studies

Learning activities and teaching methods:

Lectures, individual studies

Target group:

5th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

090185S-01 Oral and Maxillofacial Surgery II

Recommended or required reading:

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. 5th ed. Mosby 2008.

Assessment methods and criteria:

Attendance at lectures is compulsory

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Lecturer Petri Iso-Kungas

Professor György Sandor

Working life cooperation:

Work placement takes place during clinical training and teaching

091791S: Oral pathology, 5 - 6 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Salo, Tuula Anneli

Opintokohteen kielet: Finnish

ECTS Credits:

6 ECTS credits

Language of instruction:

Lectures in Finnish; research projects also in English

Timing:

5th year Autumn term, Subject studies and Advanced studies

Learning outcomes:

As general requirements for all dentists is the basic knowledge about the anatomical and histological structures of oral cavity, teeth and jaw bones. The student will know the clinical and histological variations in the normal structures of the oral cavity and jaws and the diagnostic features, steps and evaluations related to the most common oral mucosal, soft and hard tissue diseases. Particularly the student knows the special features related to oral cancer diagnostics and treatment. In addition the basic knowledge related to scientific research is required in order to be able to follow critically and adapt new evidence based research in medical and dental field.

Contents:

Clinical and histopathological findings of oral mucosal diseases, odontogenic, salivary gland, soft tissue and bone tumors, as well as in inflammatory and autoimmune conditions within oral cavity and jaw bones. In addition, the challenges in diagnostics and treatment of oral cancer are covered.

Mode of delivery:

lectures and seminars

Learning activities and teaching methods:

lectures and seminars

Target group:

5th year dental students

Prerequisites and co-requisites:

All preclinical dental studies are prerequisites for this course

Recommended optional programme components:

All preclinical dental studies are prerequisites for this course

Recommended or required reading:

Study material; selected portions:

Regezi JA, Sciubba J, Jordan RCK. Textbook: *Oral & Maxillofacial Pathology: Clinical-Pathologic Correlations. 7th edition.* [WB Saunders Co.](#), Philadelphia, PA, 2008

Assessment methods and criteria:

written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Tuula Salo

Working life cooperation:

No

Other information:

-

091755S: Periodontology V, 2 - 3 op**Voimassaolo:** 01.08.2017 -**Opiskelumuoto:** Advanced Studies**Laji:** Course**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Pekka Ylöstalo**Opintokohteen kielet:** Finnish**ECTS Credits:**

3 ECTS credits

Language of instruction:

Finnish

Timing:

5th study year, Spring term

Learning outcomes:

Associations between periodontal diseases and systemic health and diseases. To give advanced knowledge of periodontal infections on tissue and cell level.

Contents:

Different systemic diseases and disorders as a risk for periodontal diseases; Periodontal medicine. Molecular biology of inflammation; Genetic aspects of periodontal diseases.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures, individual studies, scientific seminars

Target group:

5. year dental students

Recommended optional programme components:

Strand of Oral diseases and overall health

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W. B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Pekka Ylöstalo

Senior Lecturer Hilikka Pernu

Working life cooperation:

During the course invited lecturers.

Other information:

Previous course name: Periodontal Diseases and General Health

080206A: Prescriptions, 0,5 op**Opiskelumuoto:** Intermediate Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Miia Turpeinen**Opintokohteen kielet:** Finnish**ECTS Credits:**

0.5 ECTS credits/13 hours of work

Language of instruction:

Finnish

Timing:

The course is held in the autumn semester. It is recommended to complete the course at the 4th autumn semester.

Learning outcomes:

Upon completion of the course, the student will be able to understand an appropriate way to write prescriptions. The student knows authoritative regulations and restrictions concerning the prescription and delivery of pharmaceuticals. In addition the student understands the role of pharmacy in delivering the drugs.

Contents:

Laws and rules regarding prescribing. The construction of a prescription. The information to be entered to the prescription. The authoritative regulations concerning the prescription and delivery of pharmaceuticals. The role of pharmacy in drug delivery, pharmaceutical forms, the quality control and storage of pharmaceuticals.

Mode of delivery:

The tuition will be arranged as face-to-face teaching.

Learning activities and teaching methods:

Lectures 6 hours, web-based teaching 3 h, self-study 4 h.

Target group:

Target group is dentistry students.

Prerequisites and co-requisites:

The recommended prerequisite for participation to the course is the completion of preclinical studies.

Recommended optional programme components:

The course is an independent entity and does not require additional studies carried out at the same time. No alternative courses.

Recommended or required reading:

Terveysportin (<http://www.terveysportti.fi>) lääketietokannan reseptiopas. The National Archive of Health Information www-pages (<http://kanta.fi/en>). national legislation and guidance regarding prescribing (<http://www.finlex.fi/fi/>)

Assessment methods and criteria:

Attending all lectures and the completing the web-based teaching or completing the web-based teaching and final exam.

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course utilizes verbal grading scale pass/fail

Person responsible:

Miia Turpeinen

Working life cooperation:

The course includes the guest lecture of the pharmacy.

091834S: , 2 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

2 ECTS Credits

Language of instruction:

Finnish

Timing:

5th study year

Contents:

This study module contains:

091834S-01 Prosthetic Management for Advanced Cases (1 ECTS cr)

091834S-02 Implant Dentistry II (1 ECTS cr)

For descriptions, see each course separately

Target group:

5th year dental students

Recommended optional programme components:

*Compulsory***091834S-01: Prosthetic Management for Advanced Cases, 0 op****Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Advanced Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Kirsi Sipilä**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits (part of 2 ECTS cr study module, correspondents to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

5th study year

Learning outcomes:

After the lectures the student is able to

- recognise the need for prosthetic management in advanced cases
- to tell to the patient about the prosthetic management in advanced cases
- recognise the need for referring to the specialists

Contents:

Prosthetic management in advanced cases

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures

Target group:

5th year dental students

Prerequisites and co-requisites:

Preclinical studies

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics III

Recommended or required reading:

Hand out lecture materials

Assessment methods and criteria:

Lectures

Grading:

Pass/fail

Person responsible:

Professor Kirsi Sipilä, Senior lecturer Ritva Näpänkangas, Senior lecturer Ritva Kuoppala

Working life cooperation:

None

Other information:

-

091834S-02: Implant Dentistry II, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pekka Ylöstalo, Annina Sipola, Ritva Kuoppala, Leena Ylikontiola

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 2 ECTS cr study module, correspondents to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

5th study year, Advanced studies

Learning outcomes:

After the course student

- has sufficient theoretical knowledge of implant treatment for practical work(ing life)
- can assess the indications and contraindications of implant treatment
- has skills to make the treatment plan and procedures in outline
- be able to tell about different prosthetic treatment options when planning the implant treatment
- can assess additional examinations needed for the treatment (e.g. X-rays or other imaging)
- can assess the effect of implant treatment on oral health and maintainance

Contents:

Basics of implant treatment

Mode of delivery:

Lectures

Learning activities and teaching methods:

Lectures

Target group:

5th year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics III

Recommended or required reading:

Lecture materials

Assessment methods and criteria:

Attendance at lectures is compulsory

Read more about assessment criteria at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Senior lecturer Ritva Kuoppala, Senior lecturer Leena Ylikontiola, Professor Pekka Ylöstalo

Working life cooperation:

No

091833A: Prosthetics I, 9 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

9 ECTS Credits

Language of instruction:

Finnish

Timing:

3rd study year, Spring

Contents:

This study module contains parts:

091833A-01 Fixed Prosthodontics I (3.5 ECTS cr)

091833A-02 Removable Prosthodontics I (3.0 ECTS cr)

091833A-03 Dental Materials (1.5 ECTS cr)

091833A-04 Periodontology III (1 ECTS cr)

For descriptions, see each course separately

Target group:

3rd year dental students

Recommended optional programme components:

Part of the Rehabilitation of the occlusion strand

Compulsory

091833A-01: Fixed Prosthodontics I, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Ritva Näpänkangas

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 9 ECTS cr study module, correspondents to 3.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

3rd - 4th study year, Subject studies

Learning outcomes:

After the course student has skills to examine the patient for prosthetic treatment with crowns and fixed partial dentures and knows the indications and contraindications for fixed prostheses. Student can make the treatment plan concerning fixed prostheses and perform the clinical phases of the treatment. Student knows the importance of the maintenance phase in success of the treatment.

Contents:

Indications/contraindications, Treatment planning, Principles of preparation, Metal crowns, Porcelain fused to metal, All ceramic crowns/fixed partial dentures, Resin-bonded fixed partial dentures, Impressions, Temporary crowns/bridges, Cementing, Complications/prognosis

Mode of delivery:

Lectures, demonstrations, phantom laboratory exercises, individual studies

Learning activities and teaching methods:

Lectures, demonstrations, phantom laboratory exercises, individual studies

Target group:

3rd-4th study year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics I

Recommended or required reading:

Lecture handout material,

Shillingburg HT et al. Fundamentals of fixed prosthodontics. 4th ed. Quintessence Publishing Co 2012.**Assessment methods and criteria:**

Phantom laboratory exercises, written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.**Grading:**

Scale 0-5

Person responsible:

Senior lecturer Ritva Näpänkangas, senior lecturer Ritva Kuoppala

Working life cooperation:

Phantom laboratory exercises (impressions)

Other information:

-

091833A-02: Removable Prosthodontics I, 0 op**Voimassaolo:** 01.08.2018 -**Opiskelumuoto:** Intermediate Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Ritva Kuoppala**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits (part of 9 ECTS cr study module, correspondents to 3 ECTS cr workload)

Language of instruction:

Finnish

Timing:

3rd year Spring term - 4th year Autumn term

Learning outcomes:

To recognize and diagnose patients with partially edentulous jaws and to give theoretical and clinical skills for the treatment of patients with removable or totally denture.

Contents:

Destruction of occlusion, indications of removable dentures, patient examination/treatment planning, pre-prosthetic treatment, components and design aspects of a removable denture, impressions, occlusion, complications/problems/prognosis

Mode of delivery:

Lectures, demonstrations, treatment planning exercises

Learning activities and teaching methods:

Lectures, demonstrations, treatment planning exercises

Target group:

3rd - 4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics I

Recommended or required reading:

Lecture handout material

Assessment methods and criteria:

Written exam (together with 090505A-08 Oral Rehabilitation in Periodontal Therapy)

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

Scale 0-5

Person responsible:

Senior Lecturer Ritva Kuoppala, professor Kirsi Sipilä

Working life cooperation:

-

Other information:

-

091833A-03: Dental Materials, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Ritva Näpänkangas

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 9 ECTS cr study module, correspondents to 1.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

3rd year, Spring term

Learning outcomes:

After the course the student knows the properties and manipulation the basic materials used in prosthodontics.

Contents:

Gypsum products, Waxes, Polymers and polymerization, Impression materials, Dental cements, Structure and properties metals and alloys

Mode of delivery:

Lectures, demonstrations, individual studies

Learning activities and teaching methods:

Lectures, demonstrations, individual studies

Target group:

3rd year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics I

Recommended or required reading:

Lecture handout material,
O'Brien WJ. Dental materials and their selection. 4th ed. Quintessence Publishing Co 2008. ss 1-24.

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Scale 0-5

Person responsible:

Senior Lecturer Ritva Näpänkangas, professor Kirsi Sipilä

Working life cooperation:

-

Other information:

-

091833A-04: Periodontology III, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Meeri Ojala, Pernu, Hilikka Elina

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credit (part of 9 ECTS cr study module, corresponds to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

3rd year, Spring term

Contents:

Occlusal aspects in diagnostics and treatment of periodontally destructed dentition

Learning activities and teaching methods:

Lectures, demonstrations, individual studies, phantom training

Target group:

3rd year dental students

Recommended optional programme components:

Oral Rehabilitation Strand

Dental Prosthetics I

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W.B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Senior Lecturer Hilikka Pernu

University Teacher Maeeri Ojala

Other information:

Oral Rehabilitation Strand

Previous course name: Occlusal Rehabilitation in Periodontal Therapy

091833S: Prosthetics II, 5 op**Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Advanced Studies**Laji:** Course**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

5 ECTS Credits

Language of instruction:

Finnish

Timing:

4th year, Autumn term

Contents:

This study module contains:

091833S-01 Fixed Prosthodontics II (1.0 Credit)

091833S-02 Removable Prosthodontics II (2.0 Credits)

091833S-03 Stomatognathic Physiology III (1.0 Credit) and

091833S-04 Implant Dentistry I (1.0 Credit)

Target group:

4th year dental students

Recommended optional programme components:

Part of the strand of Rehabilitation of the occlusion

*Compulsory***091833S-01: Fixed prosthodontics II, 0 op****Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Advanced Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Ritva Näpänkangas**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th year, Autumn term

Learning outcomes:

After the course student has skills to examine the patient for prosthetic treatment with inlays/onlays.

Contents:

Gold and ceramic inlays-onlays

Mode of delivery:

Lectures

Learning activities and teaching methods:

Lectures

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Part of the strand of Rehabilitation of the occlusion

Recommended or required reading:

Lecture handout material

Assessment methods and criteria:

Full-time participation needed

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Pass/fail

Person responsible:

Senior Lecturer Ritva Nöpänkangas, Senior Lecturer Ritva Kuoppala

Working life cooperation:

-

Other information:

-

091833S-02: Removable prosthodontics II, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Ritva Kuoppala

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, corresponds to 2 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th year, Autumn term

Learning outcomes:

To give theoretical basic knowledge and clinical skills which are needed for the treatment of edentulous patient by conventional methods, including laboratory training.

Contents:

Introduction to complete dentures, changes in masticatory system caused by tooth extractions, pre-prosthetic preparation of the mouth, impressions, relationship of edentate jaws, shape of the dentures - retentive, phonetic and hygienic aspects, occlusion in complete dentures, controls and recall procedures, immediate dentures

Mode of delivery:

Lectures, demonstrations, practical exercises, patient demonstrations (video), laboratory training, self-access learning

Learning activities and teaching methods:

Lectures, demonstrations, practical exercises, patient demonstrations (video), laboratory training, self-access learning

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics II

Recommended or required reading:

Lecture handout material

Molin Thorén Margareta, Gunne Johan (eds.) Textbook of removable prosthodontics - the Scandinavian approach. Munksgaard Danmark 2012.

RM Basker and JC Davenport: Prosthetic Treatment of the Edentulous Patient. Blackwell Munksgaard, 2002 Fourth Edition

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

Scale 0-5

Person responsible:

Ritva Kuoppala, professor Kirsi Sipilä

Working life cooperation:

-

Other information:

-

091833S-03: Stomatognathic Physiology III, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kirsi Sipilä

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th year, Autumn term

Learning outcomes:

To know the heterogenous background of TMD and to recognize complicated TMD and the need for special care and multidisciplinary treatment in TMD patients.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures and group work

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics II

Recommended or required reading:

Lecture hand out material

Assessment methods and criteria:

Attendance in teaching and groupwork

Read more about [assessment criteria](#) at the University of Oulu webpage.**Grading:**

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor Kirsi Sipilä, senior lecturer Ritva Näpänkangas

Working life cooperation:

No

091833S-04: Implant Dentistry I, 0 op**Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Advanced Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Ritva Kuoppala, Leena Ylikontiola, Pekka Ylöstalo, Annina Sipola**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits (part of 2 ECTS cr study module, correspondents to 1 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th study year, Advanced studies

Learning outcomes:

After the course student

- has sufficient theoretical knowledge of implant treatment for practical work(ing life)
- can assess the indications and contraindications of implant treatment
- has skills to make the treatment plan and procedures in outline
- be able to tell about different prosthetic treatment options when planning the implant treatment
- can assess additional examinations needed for the treatment (e.g. X-rays or other imaging)
- can assess the effect of implant treatment on oral health and maintainance

Contents:

Basics of implant treatment

Mode of delivery:

Lectures

Learning activities and teaching methods:

Lectures

Target group:

4th year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics III

Recommended or required reading:

Lecture materials

Assessment methods and criteria:

Attendance at lectures is compulsory

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Senior lecturer Ritva Kuoppala, Senior lecturer Leena Ylikontiola, Professor Pekka Ylöstalo

Working life cooperation:

No

Other information:

-

091732A: Stomatognathic Physiology II (pathofunction), 4 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kirsi Sipilä

Opintokohteen kielet: Finnish

ECTS Credits:

4 ECTS credits

Language of instruction:

Finnish

Timing:

3rd study year Autumn term

Contents:

The concept of pathofunction of the masticatory system; epidemiology, etiology, diagnosis and treatment of temporomandibular disorders (TMD); examination of a patient: differential diagnosis and treatment procedures.

Mode of delivery:

Lectures, demonstrations, self-access learning

Learning activities and teaching methods:

Lectures, demonstrations, self-access learning

Target group:

3rd year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

-

Recommended or required reading:

Lecture handout material,

Okeson JP. Management of temporomandibular disorders and occlusion 7 ed. Elsevier Mosby 2013, pages 102-316, 375-398, 443-456.

Assessment methods and criteria:

Written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Kirsi Sipilä, Senior Lecturer Ritva Näpänkangas

Working life cooperation:

-

Other information:

-

090185S: Dentoalveolar Surgery, 7 op**Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Advanced Studies**Laji:** Course**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

7 ECTS Credits

Language of instruction:

Finnish

Timing:

4th study year, Autumn term

Contents:

This study module contains:

090185S-01 Oral and maxillofacial surgery II

090185S-02 Periodontal surgery I

090185S-03 Oral Radiology II and

090185S-05 Oral and Maxillofacial Rehabilitation

For descriptions, see each course separately

Target group:

4th year dental students

Other information:

Part of the strand of Basic knowledge and skills on surgery

*Compulsory***090185S-01: Oral and Maxillofacial Surgery II, 0 op****Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Advanced Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Petri Iso-Kungas**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits (part of 7 ECTS cr study module, corresponds to 3.3 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th study year Autumn term, Advanced studies

Learning outcomes:

After completion of this course the student knows the basics principles of dentoalveolar surgery and has skills to perform the most common surgical procedures in dental practise.

Contents:

- wound healing
- incisions and flap technique
- operative extractions

- transplantation of the teeth
- deliberation of the teeth
- biopsies
- surgery of the benign oral tumors

Mode of delivery:

Luennot. Harjoittelu dissekoidulla sianpäällä yhdessä parodontologian opetuksen kanssa.

Learning activities and teaching methods:

Luennot. Harjoittelu dissekoidulla sianpäällä yhdessä parodontologian opetuksen kanssa.

Target group:

4th year dental students

Prerequisites and co-requisites:

Accepted course in principles of oral and maxillofacial surgery is a prerequisite for this course.

Recommended optional programme components:

Basic knowledge and skills in surgery, Dentoalveolar surgery, Oral and maxillofacial surgery

Written exam together with courses

090185S-02 Periodontal surgery I

090185S-03 Oral Radiology II and

090185S-05 Oral and Maxillofacial Rehabilitation

Recommended or required reading:

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. 5th ed. Mosby 2008.

Availability of the course textbooks can be check from [this link](#).

Assessment methods and criteria:

Written exam together with courses Written exam together with courses

090185S-02 Periodontal surgery I

090185S-03 Oral Radiology II and

090185S-05 Oral and Maxillofacial Rehabilitation

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Lecturer Petri Iso-Kungas

Professor György Sandor

Working life cooperation:

Work placement period is performed as a part of clinical training and clinical teaching in clinical teaching units.

Other information:

Part of the strand of Basic knowledge and skills in surgery

090185S-02: Periodontal Surgery I, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Meeri Ojala, Pernu, Hilikka Elina

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 7 ECTS cr study module, correspondents to 2 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th study year, Autumn term

Learning outcomes:

To understand wound healing and the main techniques of periodontal surgery

Contents:

To understand wound healing and the main techniques of periodontal surgery

Mode of delivery:

Lectures, phantom

Learning activities and teaching methods:

lectures, practical exercises, individual studies

Target group:

4th year dental students

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W.B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Availability of the course textbook can be checked from [this link](#).

Assessment methods and criteria:

Written exam together with 090185S-01 Oral and Maxillofacial Surgery II and 090185S-03 Oral Radiology II.

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Senior Lecturer Hilikka Pernu
University Teacher Meeri Ojala

Other information:

Part of the strand of Basic knowledge and skills in surgery

090185S-03: Oral Radiology II, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Annina Sipola

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 7 ECTS cr study module, correspondents to 1.2 ECTS cr workload)

Language of instruction:

Finnish

Timing:

The course is held in the autumn semester, during 4rd year

Learning outcomes:

Upon completion of the course, the student will be able to:
to find and identify abnormal patterns in the diagnostic image such as cysts, benign tumors, other bone diseases, systemic diseases, and malignant diseases. The student understands the benefits and limits of dental basic imaging and advanced imaging (CBCT) for the detection of disease or other abnormalities.

Contents:

The student understands the benefits and limits of dental basic imaging and advanced imaging (CBCT) for the detection of disease or other abnormalities

- most common cysts, benign tumors, other bone diseases, systemic diseases, and malignant diseases
- radiological findings of impacted canines
- findings in radiograph that may indicate complications during removal of the tooth

Mode of delivery:

Face-to-face teaching, Moodle

Learning activities and teaching methods:

Face-to-face teaching, Moodle

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

-

Recommended or required reading:

White, Pharoah; Oral Radiology: Principles and Interpretation, lectures

Assessment methods and criteria:

written exam

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

University teacher Annina Sipola

Working life cooperation:

-

Other information:

Part of the strand of Basic Knowledge and Skills in Surgery and the course of Dentoalveolar Surgery

090185S-05: Oral and Maxillofacial Rehabilitation, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Petri Iso-Kungas, György Sandor

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 0,6 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th study year, Advanced studies

Learning outcomes:

To give the student understanding about the possibilities of the surgical treatment in occlusal rehabilitation

Contents:

Orthognathic surgery

Mode of delivery:

Lectures

Learning activities and teaching methods:

Lectures

Target group:

4th year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

Rehabilitation of the occlusion, Prosthetics II, Oral and Maxillofacial Surgery

Recommended or required reading:

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. 5th ed. Mosby 2008.

Assessment methods and criteria:

Attendance at lectures is compulsory

Read more about [assessment criteria](#) at the University of Oulu webpage.**Grading:**

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor György Sandor, Lecturer Petri Iso-Kungas

Other information:

-

090186S: Injuries and Odontogenic Infections, 5 op**Voimassaolo:** 01.08.2018 -**Opiskelumuoto:** Advanced Studies**Laji:** Course**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** György Sandor, Petri Iso-Kungas**Opintokohteen kielet:** Finnish**ECTS Credits:**

5 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year, Spring term

Contents:

This study module contains:

090186S-01 Oral radiology III (0.8 ECTS cr),

090186S-04 Anaesthesiology (1 ECTS cr),

090186S-05 Perio-endo problems (3h) and

090186S-06 Oral and Maxillofacial Surgery IV (3.2 ECTS cr)

Target group:

4th year students of Degree Programme in Dentistry

Person responsible:

György Sandor, Petri Iso-Kungas

Other information:

Part of the strand of Basic Knowledge and Skills in Surgery

Compulsory

090186S-04: Anaesthesiology, 0 op**Voimassaolo:** 01.08.2018 -**Opiskelumuoto:** Intermediate Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opintokohteen kielet:** Finnish**ECTS Credits:**

1 ECTS credit

Language of instruction:

Finnish

Timing:

DC8, Subject studies

Learning outcomes:

The aim is to get understanding in different types of anesthesia and handling of emergency situations

Contents:

Different modes of anesthetic emergency situations, cannulation

Mode of delivery:

Lectures

Learning activities and teaching methods:

Lectures and practical exercises (12 h)

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

No

Recommended or required reading:

Lecture materials

Anestesiologian ja tehohoidon perusteet/ Leila Niemi-Murola, Kirsimarja Metsävainio, Teijo Saari, Annukka Vahtera, Merja Vakkala (Editors), Duodecim, latest edition

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. 5th ed. Mosby 2008. Chapter 2

Kurssikirjojen saatavuuden voi tarkistaa [tästä linkistä](#).**Assessment methods and criteria:**

Presence

Read more about assessment criteria at the University of Oulu [webpage](#).**Grading:**

Approved/disapproved

Person responsible:

Professor Janne Liisanantti

Working life cooperation:

-

Other information:

Part of the strand of Basic Knowledge and Skills in Surgery

090186S-06: Oral Surgery IV, 0 op**Voimassaolo:** 01.08.2020 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: György Sandor, Petri Iso-Kungas

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 090186S Injuries and Odontogenic Infections 5 ECTS or study module, correspondents to 3,2 ECT credit workload

Language of instruction:

Finnish

Timing:

4th year Spring term, Advanced studies

Learning outcomes:

At the completion of this course the student must be familiar with the first aid and treatment principles of dental traumas and maxillofacial traumas. The student must be able to perform dental splinting of traumatized teeth.

Contents:

Odontogenic infektiions, aktinomykosis and abscesses,

- dental trauma
- maxillofacial trauma
- maxillofacial pain

Mode of delivery:

Lectures, practical studies

Learning activities and teaching methods:

Lectures, practical studies

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Strand of Basic Knowledge and Skills in Surgery

090185S-01 Oral and Maxillofacial Surgery II

090186S-01 Oral Radiology III

090186S-06 Oral and Maxillofacial Surgery IV

Recommended or required reading:

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. 5th ed. Mosby 2008.

Andreasen Jens O. et al. Traumatic dental injuries. A manual. Munksgaard, latest edition

Assessment methods and criteria:

Written exam together with the course of Radiology

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Lecturer Petri Iso-Kungas

Professor György Sandor

Working life cooperation:

Work placement is performed as an integrated part of clinical teaching.

Other information:

Part of the strand of Basic Knowledge and Skills in Surgery and the course of Injuries and Odontogenic Infections

Replaces courses 090186S-02 Dental and Maxillofacial Injuries - diagnostics and treatment and 090186S-03 Odontogenic Infections

090186S-05: Perio-endo problems, 0 op

Voimassaolo: 01.08.2018 -

Opiskelumuoto: Advanced Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pekka Ylöstalo, Pernu, Hilikka Elina

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (Part of 090186S Injuries and Odontogenic Infections, 5 ECTS cr, correspondent of 0,3 ETC cr workload)

Language of instruction:

Finnish

Timing:

4th study year, Spring term

Learning outcomes:

Upon completion of the course the student knows how to diagnose and treat perio-endo infections.

Contents:

Perio-endo infections: clinical picture, diagnosis and treatment.

Mode of delivery:

Face to face teaching

Learning activities and teaching methods:

Lectures (3h)

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W.B. Saunders Company (2019). ISBN: 978-0-323-52300-4. (or the newest edition with same substance knowledge).

Page: Chapter 46:498-505 + e-pages

Assessment methods and criteria:

OSCE-test

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor Pekka Ylöstalo

Working life cooperation:

No

Other information:

Part of the strand of Basic knowledge and skills in surgery

090186S-01: Oral Radiology III, 0 op**Voimassaolo:** 01.08.2018 -**Opiskelumuoto:** Advanced Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Annina Sipola**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits (part of 4 ECTS cr study module, corresponds to 0.8 ECTS cr workload)

Language of instruction:

Finnish

Timing:

The course is held in the spring semester, during 4rd year

Learning outcomes:

Upon completion of the course, the student:

knows the imaging features of inflammatory lesions of the jaws (periapical inflammatory lesions, pericoronitis, osteomyelitis, osteoradionecrosis, bisphosphonate-related osteonecrosis of the jaws); and features of traumatic injuries and fractures of the teeth, facial bones and monitoring the healing of fractures.

Mode of delivery:

Face-to-face teaching

Moodle

Learning activities and teaching methods:

Lectures, Moodle

Target group:

4th year dental students

Recommended optional programme components:

Part of the strand of Basic Knowledge and Skills in Surgery and the course of Injuries and Odontogenic Infections

Recommended or required reading:

White, Pharoah; Oral Radiology: Principles and Interpretation, latest version

Assessment methods and criteria:

Written exam

Read more about assessment criteria at the University of Oulu [webpage](#).**Grading:**

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

University teacher Annina Sipola

Other information:

Part of the strand of Basic Knowledge and Skills in Surgery and the course of Injuries and Odontogenic Infections

091753S: Periodontal Surgery II, 1 op**Voimassaolo:** 01.08.2017 -**Opiskelumuoto:** Advanced Studies**Laji:** Course**Vastuuyksikkö:** Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pernu, Hilikka Elina, Pekka Ylöstalo

Opintokohteen kielet: Finnish

ECTS Credits:

1 ECTS Credits

Language of instruction:

Finnish

Timing:

4th study year, Spring term (DC8), Advanced studies

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures, seminars, study-group work, independent work, phantom

Target group:

Dental students of 4th study year

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W.B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Assessment methods and criteria:

Attendance to lectures, small group teaching and study-group work

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

Pass / Fail

Person responsible:

Professor Pekka Ylöstalo

Senior Lecturer Hilikka Pernu

Working life cooperation:

No

091773S: Orthodontics II, 3 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS credits

Language of instruction:

Finnish

Timing:

4th study year (Fall semester)

Learning outcomes:

After passing the course, the student understands the concepts the normal growth of the craniofacial region and expands the understanding towards growth deviations. The student understand how the tooth develops and erupts and the occlusion is formed. After these studies student can assess the developing occlusion and determine the treatment need. Student has knowledge and skills to assess the timing of the treatment and treatment options and can consider between orthodontic devices in different stages of occlusal development with the help of patient documentation and published research. Furthermore the student is aware of the possibilities and limitations in modifying occlusal development.

Contents:

Normal and abnormal development in craniofacial region. Normal dental and occlusal development.

The pathogenesis of malocclusions and the most usual orthodontic treatment of them is brought up especially from the viewpoint of growth.

The retention of orthodontic treatment and growth.

Screening in orthodontics.

The course includes the pathogenesis of the most frequent syndromes and developmental aberrations in the orofacial area and the orthodontics in cleft children.

The developmental history in dental anthropology and genetics are dealt with as well as dental morphology in different species and human populations. In addition, dental features of some groups of individuals with developmental abnormalities are discussed.

Treatment protocols with the aid of documentation of treated patient cases; give a summary on research articles.

Mode of delivery:

Blended teaching

Learning activities and teaching methods:

Lectures 27 hours, group learning 14 hours

Target group:

4th year Dental students

Prerequisites and co-requisites:

091771A Basic Skills in Orthodontics

Recommended optional programme components:

Oral Development and Orthodontics

Recommended or required reading:

An Introduction to Orthodontics. 5th ed. Littlewood, Mitchell 2019 (chapters 19, 23, 24)

Pediatric dentistry. A clinical approach. 2nd ed. by G. Koch, S. Poulsen, 2009 (chapters 14-15).

Various published research articles and lecture hand-outs.

A. Nanci: Ten Cate's Oral Histology. Development, Structure, and Function. 2008 (chapters 3,5,10).

Additional reading (latest edition):

H. Sariola: Solusta yksilöksi. Kehitysbiologia. Duodecim

Aula, Kääriäinen, Leisti: Perinnöllisyys-lääketiede. Duodecim

Assessment methods and criteria:

Passing of essay examination

Active member in group work

The course is included in the final examination of oral development and orthodontics

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Pertti Pirttiniemi, Raija Lähdesmäki

Working life cooperation:

No

Other information:

The course is included in the final examination.

090177A: Paediatric Dentistry, 5 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Päivi Rajavaara

Opintokohteen kielet: Finnish

ECTS Credits:

5 ECTS Credits

Language of instruction:

Finnish

Timing:

4th study year, Autumn term

Contents:

This study module contains:

090177A-01 Paediatrics (0.5 ECTS cr),

090177A-02 Pedodontics (2.7 ECTS cr),

090177A-03 Periodontology IV (0.3 ECTS cr),

090177A-04 Healthcare III (1 ECTS cr),
 090177A-05 Oral and maxillofacial surgery III (0.5 ECTS cr) and
 090177A-06 Abnormal eruption of permanent tooth.

For descriptions, see each course separately

Target group:

4th year dental students

Person responsible:

Päivi Rajavaara

Other information:

Part of the strand of Growth and Development

Compulsory

090177A-05: Pediatric oral and maxillofacial surgery, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Leena Ylikontiola, György Sandor, Petri Iso-Kungas

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 3 ECTS cr study module, corresponds to 0.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th study year (Autumn term, Subjects studies)

Learning outcomes:

In the end of the course the student knows the special features in surgery working with children and recognises developmental disturbances with oral and craniofacial changes.

Contents:

Childrens' oral and maxillofacial treatment possibilities

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures

Target group:

4th year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

No

Recommended or required reading:

Contemporary Oral and Maxillofacial Surgery/Editors: James R. Hupp, Edward Ellis, Myron R. Tucker. Mosby, latest edition

Availability of the textbook of the course can be checked from [this link](#).

Assessment methods and criteria:

Attendance at lectures is compulsory.

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

Pass/fail

Person responsible:

Lecturer Petri Iso-Kungas
Professor György Sandor

Working life cooperation:

No

Other information:

Part of the strand of Growth and Development and the course of Pediatric Dentistry

090177A-06: Abnormal eruption of permanent tooth, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Raija Lähdesmäki

Opintokohteen kielet: Finnish

ECTS Credits:

2h / 4h hours of work

Language of instruction:

Finnish

Timing:

Teaching is part of Paediatric Dentistry (090177A) strand exam, 4th year fall

Learning outcomes:

Upon completion of the course, the student will be able to:

- explain the abnormalities in the eruption of the permanent teeth (except third molar)
- is able to assess between follow-up and guiding the patient for proper treatment in the case of abnormal eruption pattern
- knows what to do as early treatment option in the case of abnormal eruption pattern
- is able to consult senior dentist or specialist and/or remit the patient to treatment planning and properly timed treatment

Contents:

Eruption abnormalities of the permanent teeth; incidence, aetiology, early diagnostics and treatment options especially in the view of the permanent canine.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 2 h

Target group:

Students in Dentistry, 4th year fall

Prerequisites and co-requisites:

Paediatric Dentistry (090177A) requirements

Recommended optional programme components:

Part of final exam in Orthodontics

Recommended or required reading:

Lecture hand-out and Chapter 14 in Littlewood and Mitchell, 5th ed. 2019

Assessment methods and criteria:

Assessment is based on core curriculum by attending the lecture and self-study the literature. Competence is needed to pass the exam in the Paediatric Dentistry course and final exam in Orthodontics.

Grading:

The course is assessed as part of larger exam using numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Senior lecturer Raija Lähdesmäki and professor Pertti Pirttiniemi

Working life cooperation:

No

Other information:

Paediatric Dentistry -course is part of the Growth and Development –strand as well as part of the final exam in Orthodontics (5th year autumn semester).

090177A-03: Periodontology IV, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Meeri Ojala

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 0.3 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th year Autumn term, Subjects studies

Learning outcomes:

To understand special features of periodontal tissues on children and adolescents. To recognise early changes and identify risk individuals and make a treatment plan.

Contents:

Diagnostics and treatment of periodontal diseases of young and adolescents.

Mode of delivery:

Face-to-face teaching, individual studies

Learning activities and teaching methods:

Lectures and patient cases 3 hours, examination

Target group:

4th year dental students

Prerequisites and co-requisites:

Student must have passed earlier theoretical study modules in periodontology.

Recommended optional programme components:

This study module is part of combination of oral and cranial growth and development.

Recommended or required reading:

Newman and Carranzas Clinical Periodontology. Thirteenth (13th) Edition. Newman, Takei, Klokkevold, Carranza. W.B. Saunders Company (2019). ISBN: 978-0-323-52300-4 (or the newest edition).

Available lecture books can be checked [from this link](#).

Assessment methods and criteria:

Written examination together with the courses of Pedodontics, Periodontal Diseases in Children, Oral Health and Health Service System, Pediatric Oral and Maxillofacial Surgery and Abnormal eruption of permanent tooth.

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Pekka Ylöstalo, Meeri Ojala

Working life cooperation:

No

090177A-02: Pedodontics, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Päivi Rajavaara

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

2,7 ECTS credits, part of 5 ECTS study module

Language of instruction:

Finnish

Timing:

4th study year Autumn term, Subject studies

Learning outcomes:

The aim is the student knows how to deal with the child and his/her family while doing dental treatment. He is familiar with the child's growth and development and most common disturbances in it. She is familiar with developmental tooth disorders. He /she has knowledge and skills for controlling dental caries at individual level. He knows the basic methods for controlling and preventing dental fear, using local anesthetics and sedation for children. He/she is competent of using relevant non-invasive and invasive methods in treating caries and simple developmental anomalies. Endodontic treatment of deciduous and permanent teeth. He /she is capable to carry out child's acute dental care. He/she is aware of principles in treating medically compromised children. He is aware most common syndromes.

Contents:

How to deal with and treat a child in dental care: growth and development of a child, how to deal with children of different age and developmental stage, dealing with the family, dental fear and sedation, ECC and riskfactors, control of caries and oral health promotion in children, restorative dentistry, endodontic treatment of deciduous and permanent developing teeth, developmental anomalies of teeth, dental treatment of medically compromised and mentally retarded children. In simulation laboratory, fissure sealant, restoration, pulpotomy and stainless steel crown.

Mode of delivery:

Lectures 16 h, 100% attendance required, simulation, examination as a part of Growth and development entity

Learning activities and teaching methods:

Lectures 16h, respective work required from the student 32h, book 20h, simulation hands on 4h

Target group:

4th year dental students, obligatory to all dental students

Prerequisites and co-requisites:

Previous studies according to the dental curriculum.

Recommended optional programme components:

The only option, part of Growth and Development Strand

Recommended or required reading:

- Paediatric Dentistry Welbury; Duggal, Hosey, Oxford University 2018 ; 5. edition, e-book

- Pediatric Dentistry-A Clinical Approach; Göran Koch, Sven Poulsen, Willey-Blackwell, 2017; 3. edition, e-book

Assessment methods and criteria:

Compulsory attendance in lectures and fantom teaching, exam
Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

1-5, 0 rejected; the score in the exam is the score of this period.

Person responsible:

PhD, DDS Päivi Rajavaara

Working life cooperation:

Patient work and oral health promotion to children after the period in the Dental teaching Unit of the City of Oulu, Finland. Following the work of a pediatric dentist in Oulu University Hospital.

Other information:

Preventive Dentistry and Cariology

After different course parts there will be midterm exams covering the topics dealt with in the course in question. In the beginning of DC 5, there will be the exam covering the lectures given in DC 4 and related chapters in textbook: passing this exam is required for the admittance to Restorative Dentistry course. Passing the midterm exams is the prerequisite for attending the clinical studies and final exam. All the topics covered in different course parts, as well as related topics in textbooks, are required in the final exam. Final grade will be based on a) the results of the midterm and final exams; b) score achievement in continuous clinical performance or performance in competence evaluation (given by clinical supervisors and assisting staff); c) additionally the master thesis if done on the department will be taken into consideration.

This period is obligatory to all dental students.

090177A-01: Paediatrics, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Päivi Rajavaara, Marja-Liisa Laitala

Opintokohteen kielet: Finnish

Voidaan suorittaa useasti: Kyllä

ECTS Credits:

0 ECTS credits (part of 5 ECTS cr study module, correspondents to 0.5 ECTS cr workload)

Language of instruction:

Finnish

Timing:

4th year Autumn term, Subject studies

Learning outcomes:

After the period the student has knowledge of child's normal mental development as well as factors associated with it. He/she also has knowledge of the most common acute and chronic pediatric diseases as well as how to deal with child's infections and pain.

Contents:

Normal mental development of a child and its most common disturbances. Endocrinology, asthma, cancer, juvenile arthritis, diabetes in a child; CP, genetics, infections and how to treat, controlling pain.

Mode of delivery:

Lectures, 100% participation required Lectures 16 h, 100% attendance required, simulation, examination as a part of Growth and development entity

Learning activities and teaching methods:

12 h lectures arranged as a seminar

Target group:

Obligatory to all dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

No options for accomplishment

Recommended or required reading:

Material delivered during lectures

Assessment methods and criteria:

Obligatory presence

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

100% attendance required

Person responsible:

Päivi Rajavaara, Marja-Liisa Laitala

Other information:

This period is obligatory to all dental students.

090177A-04: Oral Health and Health Service System, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 090177A Paediatric dentistry 5 ECTS or study module, corresponds to 1 ECT credit workload

Language of instruction:

Finnish

Timing:

4th study year

Learning outcomes:

Upon completion of the course, the student will be able to

- recognize the special issues in oral health and oral health care among children and adolescents
- know the scientific method and evaluation of evidence
- critically acquire and evaluate scientific literature

Contents:

Special issues in oral health and oral health care among children and adolescents, scientific method and evaluation of evidence

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures 10 h, self-study 7 h

Target group:

4th year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Part of 090177A Paediatric dentistry study module

Recommended or required reading:

Recent scientific and other relevant articles provided during the course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Read more about assessment criteria at the University of Oulu [webpage](#).**Grading:**

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, DDS Vesa Pohjola

Working life cooperation:

-

Other information:

Course is part of Growth and Development strand

043003Y: Knowledge and Research I: Literature retrieval, 2 op**Voimassaolo:** 01.08.2016 -**Opiskelumuoto:** General Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Grekula, Sirpa Birgitta, Mimmi Tolvanen**Opintokohteen kielet:** Finnish**Proficiency level:**

-

Status:

-

Required proficiency level:

-

ECTS Credits:

2 ECTS

Language of instruction:

Finnish

Timing:

1st year

Learning outcomes:

The student will be able to search research articles using basic literature retrieval methods and to use bibliographic databases available at the Medical Faculty.

Contents:

Library information systems, medical and dental publications, scientific online journals, Medline, Medic, Scopus, Cochrane Library, electronic books, reference management software.

Mode of delivery:

Blended teaching

Target group:

Medical and dental students

Prerequisites and co-requisites:

None.

Recommended optional programme components:

-

Recommended or required reading:

Material in lessons small group lessons

Assessment methods and criteria:

Completion of practical project

Grading:

Pass/Fail

Person responsible:

Associate professor Mimmi Tolvanen

Working life cooperation:

-

Other information:

-

043002Y: Knowledge and Research I: Scientific writing, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: General Studies**Laji:** Course**Vastuuyksikkö:** Medicine**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Mimmi Tolvanen**Opintokohteen kielet:** Finnish**Proficiency level:**

-

Status:

-

Required proficiency level:

-

ECTS Credits:

3 ECTS credits

Language of instruction:

Finnish

Timing:

Autumn, 1st semester

Learning outcomes:

By the end of the course the student has practiced the following skills: using information and communication technology resources in the University of Oulu, using workstations available in the Medical Faculty, applying basic software necessary in the studies. The student knows basics in scientific writing.

Contents:

Information and communication technology. Workstations, networks, and office software. Research ethics and planning. Guidelines for written assignments and word processing. Structure of assignments and thesis, reporting of findings, tables and figures, citing and references.

Mode of delivery:

Face to face teaching

Learning activities and teaching methods:

Lectures, group work and independent work.

Target group:

Medical and dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

Knowledge and Research I: Literature retrieval

Recommended or required reading:

Material in lessons and small group lessons

Assessment methods and criteria:

Group work, learning tests, written task.

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Mimmi Tolvanen

Working life cooperation:

-

Other information:

-

043004Y: Knowledge and Research II: Scientific communication, 5 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Mimmi Tolvanen

Opintokohteen kielet: Finnish

Proficiency level:

-

Status:

-

Required proficiency level:

-

ECTS Credits:

5 ECTS credits

Language of instruction:

Finnish

Timing:

Spring, 1st year

Learning outcomes:

The student is familiar with the research process and with the characteristics of scientific information including an ability to obtain and process scientific information, and to report and apply the results especially in the fields of medicine, dentistry and health sciences.

The student knows the role of scientific publications, can use and evaluate information sources critically. The student will be able to search research articles using basic literature retrieval methods and to use bibliographic databases available at the Medical Faculty.

The student knows basic principles in research ethics and good scientific practice.

Contents:

Guidelines for written assignments and word processing:

Structure of assignments and thesis, reporting of findings, tables and figures, citing and references.

Scientific information:

Principles of scientific research, ethics in research, research methods in the main disciplines (clinical medicine, epidemiology, biomedicine and health sciences).

Scientific communication:

Scientific journals, research articles, critical evaluation of research findings, ethics in scientific publication and bibliometrics.

Special issues in medical research:

Ethics in research, regulations in clinical research and use of animals in scientific research, research groups.

Mode of delivery:

Face to face teaching

Learning activities and teaching methods:

Lectures, group work and independent work.

Target group:

Medical and dental students

Prerequisites and co-requisites:

Knowledge and Research I: Scientific writing

Knowledge and Research I: Literature retrieval

Recommended optional programme components:

-

Recommended or required reading:

Material in lessons and small group lessons

Assessment methods and criteria:

Group work, learning tests, written task

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail

Person responsible:

Mimmi Tolvanen

Working life cooperation:

-

Other information:

-

043005Y: Knowledge and Research III: Data analysis, 3 op

Voimassaolo: 01.08.2016 -

Opiskelumuoto: General Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Mimmi Tolvanen

Opintokohteen kielet: Finnish

ECTS Credits:

3 ECTS credits

Language of instruction:

Finnish

Timing:

Spring, 2st year

Learning outcomes:

The student is familiar with statistical computing in the fields of medicine, dentistry and health sciences. Further, the student is able to analyze data with basic statistical methods, use basic statistical significance tests and inference methods, and evaluate critically scientific research reports.

Contents:

Aims and phases of statistical research, planning statistical research, obtaining data, variable distributions (frequencies, graphs and statistics), basics in statistical inference and methods (estimates, significance tests and confidence limits), basic methods in comparing groups and estimating associations between variables, specific methods applied in medical research.

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures, exercises, independent work, exam

Target group:

Medical and dental students

Prerequisites and co-requisites:

Knowledge and Research I: Scientific writing

Knowledge and Research I: Literature retrieval

Knowledge and Research II: Scientific communication

Recommended optional programme components:

-

Recommended or required reading:

Material in lessons and small group lessons.

Assessment methods and criteria:

Group work, exam

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Mimmi Tolvanen

040300A: Maturity exam (native language), 0 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Medicine

Arvostelu: 1 - 5, pass, fail

Opettajat: Outi Mikkola

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS Credits

Language of instruction:

Finnish

Contents:

Student writes an essay in his/her native language about the topic of the thesis to show a good command of the language and the content of the thesis. If the student's native language is another than Finnish or Swedish the Faculty will define separately the requirements for the language test.

Learning activities and teaching methods:

Writing an essay.

Assessment methods and criteria:

The essay is examined first by the supervisor of the thesis and then by the language teacher.

Grading:

Pass / fail

091601S: Study plan, 4 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

4 ECTS credits

Language of instruction:

Finnish, English

Timing:

It is possible to start to do thesis already at the beginning of the studies. Prerequisites of the thesis depends of the theme and should be agreed with the responsible person of the research project.

Learning outcomes:

The thesis in the degree Programme in Dentistry is a scientific work which shows the student's ability to scientific thinking and research. The student gets acquainted with scientific research and is able to evaluate research publications, the student is capable of independent and responsible work as part of a scientific community, develops his/her problem solving skills as well as critical and ethical thinking, and increases his/her readiness to scientific communication.

The thesis (20 ECTS credits) includes formulation of research plan (4 ECTS credits), independent research work under the supervision of the teacher, writing a thesis or scientific article (student as a first or second writer), oral presentation of the research and participation twice in research seminar.

Directors of the disciplines in the degree Programme in Dentistry give information about their research projects and possible aims of the thesis. Info session will be also held every year. One potential way to find the aim of the thesis and its supervisor is Syväriportti <http://www.duodecim.fi/syvariportti/>

Contents:

Writing a study plan and make an agreement of supervision.

Assessment methods and criteria:

Form of the agreement of supervision can be found here: <https://www oulu.fi/opiskelijalle/node/57251#6196>

Grading:

Pass / Should be complemented

Person responsible:

Tuomo Heikkinen

Working life cooperation:

Research work gives excellent possibilities to develop practices in working life and create contacts.

091602S: Thesis, 16 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Advanced Studies

Laji: Diploma thesis

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

16 ECTS credits

Language of instruction:

Finnish, English

Timing:

It is possible to start to do thesis already at the beginning of the studies. Prerequisites of the thesis depends of the theme and should be agreed with the responsible person of the research project.

Learning outcomes:

The thesis in the degree Programme in Dentistry is a scientific work which shows the student's ability to scientific thinking and research. The student gets acquainted with scientific research and is able to evaluate research publications, the student is capable of independent and responsible work as part of a scientific community, develops his/her problem solving skills as well as critical and ethical thinking, and increases his/her readiness to scientific communication.

The thesis (20 ECTS credits) includes formulation of research plan (4 ECTS credits), independent research work under the supervision of the teacher, writing a thesis or scientific article (student as a first or second writer), oral presentation of the research and participation twice in research seminar.

Directors of the disciplines in the degree Programme in Dentistry give information about their research projects and possible aims of the thesis. Info session will be also held every year. One potential way to find the aim of the thesis and its supervisor is Syväriportti <http://www.duodecim.fi/syvariportti/>.

Assessment methods and criteria:

Assessment criterias can be found here: <http://www oulu.fi/ltk/node/21902>

Grading:

1-5

Person responsible:

Tuomo Heikkinen, Raija Lähdesmäki

Working life cooperation:

Research work gives excellent possibilities to develop practices in working life and create contacts.

091510A: Cariology, Endodontology and Pediatric Dentistry, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Timing:

After 5th year studies in the curriculum of dentistry

Learning outcomes:

Includes learning outcomes of the courses 091510A-01 Cariology, Endodontology and Pediatric Dentistry, final examination and 091510A-02 Cariology, Endodontology and Pediatric Dentistry, Clinical training.

Contents:

091510A-01 Cariology, Endodontology and Pediatric Dentistry, final examination (0 ECTS cr) and 091510A-02 Cariology, Endodontology and Pediatric Dentistry, Clinical training (0 ECTS cr). The master thesis for this field can be considered as positive input.

Target group:

5th year student after completing studies in cariology, endodontology and pediatric dentistry.

Assessment methods and criteria:

Weighted mean of the grades based on the contents.

Positive input of the master thesis in the field.

Grading:

Numeric scale 0-5

Person responsible:

PhD, DDS Marja-Liisa Laitala

PhD, DDS Päivi Rajavaara

Working life cooperation:

Training clinic, Oulu public health care

Oulu University Hospital

Other information:

Final grade in Healthcare in the curriculum Licentiate of Dentistry (330 ECTS credits).

Compulsory

091510A-01: Cariology, Endodontology and Pediatric Dentistry, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Timing:

5th study years, spring term

Learning outcomes:

In the final exam, students are expected to master all previously lectured and trained topics in the field.

Contents:

All theoretical courses in Cariology, Endodontology and Pediatric Dentistry including clinical practice:

090170P Introduction to Oral Health II

090171A-03 Tooth Morphology

091711A Cariology I

091712A Cariology II

091714S Cariology III

091713A Endodontics I

091713S Endodontics II

090177A-02 Pedodontics

090177A-01 Paediatrics

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Written essay and feed-back lecture

Target group:

5th year student after completing studies in Cariology, Endodontology and Pediatric Dentistry.

Prerequisites and co-requisites:

091701A Clinical Training DC5

091702A Clinical Training DC6

091703A Clinical Training DC7

091704A Clinical Training DC8

091705A Clinical Training DC9

Recommended optional programme components:

All theoretical courses in Cariology, Endodontology and Pediatric Dentistry including clinical practice:

090170P Introduction to Oral Health II

090171A-03 Tooth Morphology

091711A Cariology I

091712A Cariology II

091714S Cariology III

091713A Endodontics I

091713S Endodontics II

090177A-02 Pedodontics

090177A-01 Paediatrics

Recommended or required reading:

Review of the theoretical and practicing materials in Cariology, Endodontics and Pediatric dentistry, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

Written essay

Grading:

Numeric scale 0-5

Person responsible:

PhD, DDS Marja-Liisa Laitala

PhD, DDS Päivi Rajavaara

Working life cooperation:

Clinical know-how in Cariology, Endodontology and Pediatric Dentistry is part of competence in the final exam. Clinical practice is supervised patient work in above mentioned fields of clinical dentistry, and following special care treatment in the University hospital.

091510A-02: Cariology, Endodontology and Pediatric Dentistry, Clinical Training, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

Clinical know-how in Cariology, Endodontics and Pediatric Dentistry

Language of instruction:

Finnish

Timing:

3rd-5th study years

Learning outcomes:

Upon completion of the course, the student will be able to

- diagnose different hard dental tissues lesions among different ages
- make a treatment plan and perform it
- know different restorative materials in theory and in clinical work
- master endodontic pathologies and diagnoses, make an endodontic treatment plan and execute it and know the rotating endodontic instruments
- master different ages in children which affect dentition, manifestations of general diseases and child abuse and restorative treatment plan and it's execution with children
- know differences of public dental health and special treatment clinics considering cariology, endodontics and pediatric dentistry

Contents:

The student accomplishes the treatment of cariological and endodontic patients and participates to pedodontics clinic's work according to the criteria of teaching clinic of the city of Oulu.

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Clinical practice (40 ects credits)

Target group:

3rd – 5th year dental students

Prerequisites and co-requisites:

091701A Clinical Training DC5
 091702A Clinical Training DC6
 091703A Clinical Training DC7
 091704A Clinical Training DC8
 091705A Clinical Training DC9
 091706A Clinical Training DC10

Recommended optional programme components:

090170P Introduction to Oral Health II
 090171A-03 Tooth Morphology
 091711A Cariology I
 091712A Cariology II
 091714S Cariology III
 091713A Endodontics I
 091713S Endodontics II
 090177A-02 Pedodontics
 090177A-01 Paediatrics

Recommended or required reading:

Review of the theoretical and practicing materials in Cariology, Endodontics and Pediatric dentistry, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

In clinical practice OukaOpa app is used for self-assessment in above mentioned fields based on national competences, clinical teachers will evaluate.

Grading:

Numeric scale 0-5

Person responsible:

PhD, DDS Marja-Liisa Laitala
 Raija Lähdesmäki

Working life cooperation:

Clinical practice is supervised patient work in above mentioned fields of clinical Dentistry, and following special care treatment in the University hospital.

Other information:

The score is based on clinical practice (40 ects credits).

091580A: Healthcare, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

Final grade in the field of Healthcare (7.5 ECTS credits)

Language of instruction:

Finnish

Timing:

After 5th year studies in the curriculum of Dentistry.

Learning outcomes:

Includes learning outcomes of 091580A-01 Healthcare, final examination and 091580A-02 Healthcare, Clinical Training.

Contents:

This study module contains:

091580A-01 Healthcare, final examination (0 Credits)

091570A-02 Oral Development and Orthodontics, Clinical Training, grade (0 Credits)

Target group:

Dental students after 5th year studies in Healthcare

Prerequisites and co-requisites:

Passed studies in Healthcare

Assessment methods and criteria:

Weighted mean of the grades based on the contents.

Positive input of the master thesis in the field.

Grading:

Numeric scale 0-5

Person responsible:

PhD, DDS Marja-Liisa Laitala

University teacher Raija Lähdesmäki

Working life cooperation:

Training clinic, Oulu public health care

Other information:

Final grade in Healthcare in the curriculum Licentiate of Dentistry (330 ects credits).

Compulsory

091580A-01: Healthcare, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

Grade in the field of healthcare

Language of instruction:

Finnish

Timing:

5th study year, spring term

Learning outcomes:

Learning outcomes of theoretical studies and clinical practise in healthcare

Contents:

All theoretical courses and clinical practice in Healthcare

090171A-02 Organization and Providers of Oral Health Care Services (0,5 ECTS)

090182A-05 Healthcare I (1 ECTS)

090182A-06 Healthcare II (0.5ECTS)

090177A-04 Healthcare III (1 ECTS)

091781S Healthcare IV (2 ECTS)

0901782S Healthcare V (3 ECTS) which includes study modules

091782S-01 Immediate Supervisor in Oral healthcare (1.5 ECTS) and

091782S-02 Acting as a Dentist in the Oral Health Care System (1.5 ECTS)

Mode of delivery:

Face to face

Learning activities and teaching methods:

Written essay

Target group:

5th year Dental students

Recommended or required reading:

Theoretical and practicing materials in Healthcare based in updated curriculum.

Assessment methods and criteria:

Written essay

Grading:

Numeric scale 0-5

Person responsible:

PhD, DDS Marja-Liisa Laitala

University teacher Raija Lähdesmäki

Other information:

Curriculum based updating exam (theory and clinical skills).

091580A-02: Healthcare, Clinical Training, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

ECTS Credits:

Clinical know-how in Healthcare

Language of instruction:

Finnish

Timing:

3rd spring term and 4.th and 5th study years (KLPH)

Learning outcomes:

Learning outcomes include e.g.

- professional growth; ethical principles and legislation in health care
- professional communication, team work
- principles in health promotion of individuals and populations

Contents:

see learning outcomes

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Clinical practice (40 ects credits)

Target group:

Dental students

Prerequisites and co-requisites:

091701A Clinical Training DC5

091702A Clinical Training DC6

091703A Clinical Training DC7

091704A Clinical Training DC8

091705A Clinical Training DC9

091706A Clinical Training DC10

Recommended optional programme components:

090171A-02 Organization and Providers of Oral Health Care Services (0,5 ECTS)

090182A-05 Healthcare I (1 ECTS)

090182A-06 Healthcare II (0.5ECTS)

090177A-04 Healthcare III (1 ECTS)

091781S Healthcare IV (2 ECTS)

0901782S Healthcare V (3 ECTS) which includes study modules

091782S-01 Immediate Supervisor in Oral healthcare (1.5 ECTS) and

091782S-02 Acting as a Dentist in the Oral Health Care System (1.5 ECTS)

Recommended or required reading:

Review of the theoretical and practicing materials

Assessment methods and criteria:

In clinical practice OukaOpa app is used for self-assessment based on national competences, clinical teachers' evaluations.

Grading:

Numeric scale 0-5

Person responsible:

PhD, DDS Marja-Liisa Laitala

Programme manager Raija Lähdesmäki

Working life cooperation:

Clinical practise in the training clinic of Oulu public health care and Oulu University Hospital

Other information:

The score is based on clinical practice (40 ects credits).

091570A: Oral Development and Orthodontics, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

Final grade in the field of Orthodontics (12 ects credits)

Language of instruction:

Finnish

Timing:

After 5th year studies in the curriculum of Dentistry.

Learning outcomes:**Goals (1.-4 yrs)**

1) Examination of occlusion

- The student knows the emergency and developmental timetable of dentition
- The student can describe the characteristics of occlusion during examination
- The student can recognize malocclusions and refer the patient for appropriate follow-up or treatment
- The student is able to recognize harmful extrinsic factors related to occlusal development like persistent oral habits and to guide the patient in these issues.

2) Clinical performance

- The student is able to perform first aid in orthodontics like to cement or fix broken fixed orthodontic appliances or parts of it.
- The student can bond and insert simple orthodontic appliances in regionally related, less severe malocclusions
- The student is able to take care of oral hygienic issues during orthodontic treatment (like risks and prophylactic means)

Goals/graduating dentist, in addition:

- Knows the normal development of dentition and occlusion and morphologic aberrations in them.
- Can recognize those malocclusions that need follow-up and treatment during different developmental stages of dentition
- The student is able to refer the patients with appropriate timing for screening or treatment both during the growth and after the growth period.
- The student is able to perform simple orthodontic treatments or parts of it, under supervision.
- The student knows the modern treatment methods and techniques in orthodontics.

Contents:

This study module contains:

091570A-01 Oral Development and Orthodontics, final examination (0 Credits)

091570A-02 Oral Development and Orthodontics, Clinical Training, grade (0 Credits)

Positive input of the thesis in the field.

Target group:

Students in Dentistry after 5th year studies in Orthodontics.

Assessment methods and criteria:

Weighted mean of the grades based on the contents.

Grading:

Numeric scale 0-5

Person responsible:

Professor Pertti Pirttiniemi

University teacher Raija Lähdesmäki

Working life cooperation:

Clinical teacher in Orthodontics, Teaching clinic, Oulu city, Marja Riitta Perkiömäki

Other information:

Final grade in Orthodontics in the curriculum Licentiate of Dentistry (330 ects credits).

Compulsory

091570A-01: Oral Development and Orthodontics, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

Grade in the field of Orthodontics

Language of instruction:

Finnish

Timing:

Autumn term 5th academic year

Learning outcomes:**Goals (1.-4 yrs)**

1) Examination of occlusion

- The student knows the emergency and developmental timetable of dentition
- The student can describe the characteristics of occlusion during examination
- The student can recognize malocclusions and refer the patient for appropriate follow-up or treatment
- The student is able to recognize harmful extrinsic factors related to occlusal development like persistent oral habits and to guide the patient in these issues.

2) Clinical performance

- The student is able to perform first aid in orthodontics like to cement or fix broken fixed orthodontic appliances or parts of it.
- The student can bond and insert simple orthodontic appliances in regionally related, less severe malocclusions
- The student is able to take care of oral hygienic issues during orthodontic treatment (like risks and prophylactic means)

Goals/graduating dentist, in addition:

- Knows the normal development of dentition and occlusion and morphologic aberrations in them.
- Can recognize those malocclusions that need follow-up and treatment during different developmental stages of dentition
- The student is able to refer the patients with appropriate timing for screening or treatment both during the growth and after the growth period.
- The student is able to perform simple orthodontic treatments or parts of it, under supervision.
- The student knows the modern treatment methods and techniques in orthodontics.

Contents:

All theoretical courses in Orthodontics including clinical practice:

090171A-01 Introduction to Development of Occlusion and Orthodontics (0.5 Credit)

091771A Orthodontics I including:

- 091771A-01 Diagnostics in Orthodontics (1 Credits) and
- 091771A-02 Basic Orthodontic Skills (6 Credits)

091772S Orthodontics III including:

- 091772S-01 ORTHO-Seminars 1-5 (1.5 credit)
- 091772S-02 Pathology in occlusal development and adult orthodontics (0.5 credit)

090177A-06 Abnormal eruption patterns of permanent teeth 2 h

Lessons in Implantology and facial pain seminars.

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Written essay (3 hours) and feedback lecture

Target group:

Students in Dentistry in the 5th year

Prerequisites and co-requisites:

091701A Clinical Training DC5

091702A Clinical Training DC6

091703A Clinical Training DC7

091704A Clinical Training DC8

091705A Clinical Training DC9

Recommended or required reading:

Review of the theoretical and practicing materials in Orthodontics, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

Written essay (3 hours) and feedback lecture

Grading:

Numeric scale 0-5

Person responsible:

Professor Pertti Pirttiniemi
University teacher Raija Lähdesmäki

Working life cooperation:

Clinical know-how in Orthodontics is part of competence in the final exam. Clinical practice is supervised patient work in Orthodontic field of clinical Dentistry, mainly growing patients and following special care treatment in the University hospital in Orthodontic field.

Other information:

Curriculum based updating exam (theory and clinical skills).

091570A-02: Oral Development and Orthodontics, Clinical Training, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

Clinical know-how in Orthodontics

Language of instruction:

Finnish

Timing:

3rd autumn term and 4.th and 5th academic years (KLPH)

Learning outcomes:**Aims/ When seeking deputy position as a dentist (DC8)**

Examination of occlusion

- Eruption timetable of teeth
- Documentation
- Recognizes malocclusions
- Knows how to refer a patient
- Recognizes harmful extrinsic factor for occlusion

2. Clinical competences

- First aid in orthodontics
- Simple orthodontic procedures
- Knows how to maintain oral hygienic habits during treatment

Aims/Graduating dentist (DC 10), in addition to above mentioned:

- Knows the normal development of occlusion
- Recognizes the need for follow-up or treatment of different malocclusions during development

Contents:

Teaching includes at least:

1. Planning of orthodontic treatment, while difficult treatment is done by a specialist
2. Screening of malocclusions in children and adults
3. Orthodontic diagnosis: Anamnesis, morphologic and functional analysis, general oral health
4. Timing and the main principled of orthodontic treatment and devices
 - 1 or 2 examination of own patients.(Including impressions, occlusal registration, cephalometric analysis and treatment documentation). Possibly an examination of end result of an orthodontic case.
5. Follow-up of following treatment modalities:
 - Quad helix
 - Extra-oral traction

- Functional device
 - Fixed appliance
 - Cross elastics
6. Competence of following actions:
- Bracket placement
 - Cementing of orthodontic band
 - First aid in orthodontics
 - Patient advice concerning harmful habits
 - Follow-up and maintenance in orthodontics

Mode of delivery:

Face to face

Learning activities and teaching methods:

Clinical practice (40 ects credits)

Target group:

Students in Dentistry 3rd, 4th and 5th years

Prerequisites and co-requisites:

091701A Clinical Training DC5
 091702A Clinical Training DC6
 091703A Clinical Training DC7
 091704A Clinical Training DC8
 091705A Clinical Training DC9
 091706A Clinical Training DC10

Recommended optional programme components:

091570A-01 Oral Development and Orthodontics:
 090171A-01 Introduction to Development of Occlusion and Orthodontics (0.5 Credit)
 091771A Orthodontics I including:
 091771A-01 Diagnostics in Orthodontics (1 Credits) and
 091771A-02 Basic Orthodontic Skills (6 Credits)
 091772S Orthodontics III including:
 091772S-01 ORTHO-Seminars 1-5 (1.5 credit)
 091772S-02 Pathology in occlusal development and adult orthodontics (0.5 credit)
 090177A-06 Abnormal eruption patterns of permanent teeth 2 h
 Lessons in Implantology and facial pain seminars.

Recommended or required reading:

Review of the theoretical and practicing materials in Orthodontics, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

In clinical practice OukaOpa app is used for self-assessment in Orthodontics based on national competences, clinical teachers will comment.

Grading:

Numeric scale 0-5

Person responsible:

Professor Pertti Pirttiniemi
 Programme manager Raija Lähdesmäki

Working life cooperation:

Clinical practice is supervised patient work in Orthodontic field of clinical Dentistry, mainly growing patients and following special care treatment in the University hospital in Orthodontic field.

Other information:

The score in Orthodontics is based on clinical practice (40 ects credits).

091590A: Oral Pathology, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Salo, Tuula Anneli

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Timing:

5th spring semester

Learning outcomes:

Upon completion of the course, the student:

- knows the variations of the normal oral mucosa
- knows the normal variations of oral cavity and jaws
- can clinically diagnose oral mucosal diseases
- knows the phases of histopathological diagnosis of different oral diseases
- is able to interpret histopathological results
- understands the characteristics of diagnosis and treatment of oral cancer patients
- can treat the most common oral mucosal diseases
- understands theoretical knowledge and scientific results, in order to follow, analyze and use new research based information

Contents:

This study module contains:

091590A-01 Oral pathology, grade

091590A-02 Oral pathology, clinical training, grade

Target group:

Students in Dentistry after successful completion of 1st and 5th year studies of the subject.

Assessment methods and criteria:

Final grade is calculated based on the weighted average of the grades of the courses Oral Pathology and Oral mucosal diseases. In addition feedback of the clinical training in City of Oulu Teaching health centre is taken into account.

Grading:

The course utilizes a numerical grading scale of 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Tuula Salo

Compulsory

091590A-01: Oral Pathology, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Salo, Tuula Anneli

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Timing:

5th spring semester

Learning outcomes:

Upon completion of the course, the student:

- knows the variations of the normal oral mucosa
- knows the normal variations of oral cavity and jaws
- can clinically diagnose oral mucosal diseases
- knows the phases of histopathological diagnosis of different oral diseases
- is able to interpret histopathological results
- understands the characteristics of diagnosis and treatment of oral cancer patients

- can treat the most common oral mucosal diseases
- understands theoretical knowledge and scientific results, in order to follow, analyze and use new research based information.

Contents:

This study module contains:

091791A Diseases of oral mucosa 3 ECTS

091791S Oral pathology 6 ECTS

Mode of delivery:

Lectures, groupwork and self-study

Learning activities and teaching methods:

Lectures, groupwork and self-study

Target group:

Hammaslääketieteen opiskelijat, kun opinnoista on oppiaineen osalta suoritettu hyväksytysti 1. – 5. vuosikurssien opinnot.

Prerequisites and co-requisites:

All preclinical studies.

Recommended or required reading:

Lecture notes and partly from the book:

Regezi JA, Sciubba J, Jordan RCK. Textbook: Oral & Maxillofacial Pathology: Clinical-Pathologic Correlations. 7th edition. WB Saunders Co., Philadelphia, PA, 2008.

Assessment methods and criteria:

Grade is calculated based on the weighted average of the grades of courses Oral Pathology and Diseases of oral mucosa.

Grading:

The course utilizes a numerical grading scale of 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor Tuula Salo

091590A-02: Oral Pathology, Clinical Training, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Language of instruction:

Finnish

Timing:

3rd spring term and 4th and 5th academic years

Learning outcomes:

Learning outcomes after 4th year:

- Knows oral anatomy
- Can assess mucosal status during initial check-up
- Recognises the most common mucosal diseases
- Can record proper mucosal status
- Learns to assess the clinical needs of a new patient and need for consultation and further investigations
- Knows the diagnostics of the common mucosal diseases and learns to use them
- Can write a referral for pathological diagnostics and other investigations
- Knows the treatment options for the common mucosal diseases

Learning outcomes for graduating dentist, in addition to above

- Advances in diagnostics and in the evaluation of clinical needs
- Can evaluate different realistic therapeutic modalities based on anamnesis, aetiology, status and specialist consultations
- Learns to work fluently and in organised manner with a multidisciplinary team
- Can fluently use diagnostic methods of mucosal diseases
- Can inform patient about therapeutic modalities of the mucosal diseases and manages the most common ones
- Is able to take mucosal biopsy (and knows when a dentist should not take a biopsy themselves)
- Can evaluate patho-anatomical diagnosis and take care of a patient according to the diagnostics
- Is able to work independently as a dentist
- Trusts him/herself as a professional, but knows also their own limitations and directs patients to the specialist if needed

Contents:

Comprehensive treatment of patients in City of Oulu Teaching health centre. Service in Oulu University Hospital Oral and Maxillofacial clinics.

Mode of delivery:

Clinical training based on the degree legislation is organized in City of Oulu Teaching health centre and Oulu University Hospital Oral and Maxillofacial clinics. Clinical training starts 3rd spring term and lasts until 5th academic year, when ECTS credits and learning outcomes have been fulfilled.

Learning activities and teaching methods:

Clinical practice is supervised patient work in a multidisciplinary team. Includes also following special care treatment in Oulu University Hospital Oral and Maxillofacial clinics.

Target group:

Students in Dentistry 3rd, 4th and 5th years

Prerequisites and co-requisites:

091701A Clinical Training DC5
 091702A Clinical Training DC6
 091703A Clinical Training DC7
 091704A Clinical Training DC8
 091705A Clinical Training DC9
 091706A Clinical Training DC10

Recommended or required reading:

Review of the theoretical and practicing materials.

Assessment methods and criteria:

In clinical practice OukaOpa app is used for field- and learning outcome specific self-assessment, clinical teachers will give their comments.

Grading:

The course utilizes a numerical grading scale of 0-5. In the numerical scale zero stands for a fail.

Person responsible:

University Researcher Raija Lähdesmäki
 Services Supervisor Päivi Harju

091560A: Oral Radiology, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Annina Sipola

Opintokohteen kielet: Finnish

ECTS Credits:

Final grade in the field of Oral Radiology

Language of instruction:

Finnish

Timing:

After 5th year studies in the curriculum of Dentistry.

Learning outcomes:

The student will be able to:

understand the basic principles underlying of dental imaging, panoramic (and other extraoral imaging) and intraoral imaging and perform a dental X-ray examination.

- knows how to write radiological referral and report.

The student shall have basic knowledge of the health effects of ionizing radiation and of the exposure of the patient to radiation based on which one can assume the responsibility for the justification and optimization of the procedure.

The student knows the importance of accurate diagnosis for successful treatment and radiographic appearances of

- normal anatomy, paranasal sinuses and temporomandibular joints

- dental anomalies

- dental caries, resorptions

- periodontal disease

- periapical inflammatory lesions

- infections (pericoronitis, osteomyelitis, osteonecrosis)

- findings in radiograph that may indicate complications during removal of the tooth

- most common cysts, benign tumors

- radiology of dental and facial traumas

- radiological features of malignant diseases

The student understands the benefits and limits and guidelines for the use of of dental basic imaging (dental panoramic, intraoral intraoral imaging), lateral cephalogram, extraoral projections and advanced imaging (CBCT) for the detection of disease or other abnormalities.

Contents:

This study module contains:

091570A-01 Oral Radiology, final examination (0 Credits)

091570A-02, Oral Radiology , Clinical Training, grade (0 Credits)

Positive input of the thesis in the field.

Target group:

Students in Dentistry after 5th year studies in Oral Radiology.

Assessment methods and criteria:

Weighted mean of the grades based on the contents.

Grading:

Numeric scale 0-5

Person responsible:

University teacher Annina Sipola

Working life cooperation:

Teaching clinic, Oulu city

Other information:

Final grade in Orthodontics in the curriculum Licentiate of Dentistry (330 ects credits).

Compulsory

091560A-01: Oral Radiology, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Annina Sipola

Opintokohteen kielet: Finnish

ECTS Credits:

Grade in the field of Oral Radiology

Language of instruction:

Finnish

Timing:

Autumn term 5th academic year

Learning outcomes:

The student will be able to:

- understand the basic principles underlying of dental imaging, panoramic (and other extraoral imaging) and intraoral imaging and perform a dental X-ray examination.
- knows how to write radiological referral and report.

The student shall have basic knowledge of the health effects of ionizing radiation and of the exposure of the patient to radiation based on which one can assume the responsibility for the justification and optimization of the procedure.

The student knows the importance of accurate diagnosis for successful treatment and radiographic appearances of

- normal anatomy, paranasal sinuses and temporomandibular joints
- dental anomalies
- dental caries, resorptions
- periodontal disease
- periapical inflammatory lesions
- infections (pericoronitis, osteomyelitis, osteonecrosis)
- findings in radiograph that may indicate complications during removal of the tooth
- most common cysts, benign tumors
- radiology of dental and facial traumas
- radiological features of malignant diseases

The student understands the benefits and limits and guidelines for the use of of dental basic imaging (dental panoramic, intraoral intraoral imaging), lateral cephalogram, extraoral projections and advanced imaging (CBCT) for the detection of disease or other abnormalities.

Contents:

All theoretical courses in Oral Radiology including clinical practice:

091761A Oral Radiology I (4 op)

090185S-03 Oral Radiology II (1,2 op)

090186S-01 Oral Radiology III (0,8 op)

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Written essay (3 hours) and feedback lecture

Target group:

Students in Dentistry in the 5th year

Prerequisites and co-requisites:

091701A Clinical Training DC5

091702A Clinical Training DC6

091703A Clinical Training DC7

091704A Clinical Training DC8

091705A Clinical Training DC9

Recommended or required reading:

Review of the theoretical and practicing materials in Oral Radiology, clinical practice and know-how in Teaching clinic, Oulu City University Hospital.

Assessment methods and criteria:

Written essay (3 hours) and feedback lecture

Grading:

Numeric scale 0-5

Person responsible:

University teacher Annina Sipola

Working life cooperation:

Clinical know-how in Oral Radiology is part of competence in the final exam. Clinical practice is supervised patient work in Oral Radiology and following special care treatment in the University hospital in Oral Radiology field.

Other information:

Curriculum based updating exam (theory and clinical skills).

091560A-02: Oral Radiology, Clinical Training, grade, 0 op**Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Intermediate Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Annina Sipola**Opintokohteen kielet:** Finnish**ECTS Credits:**

Clinical know-how in Oral Radiology

Language of instruction:

Finnish

Timing:

3rd autumn term and 4.th and 5th academic years (KLPH)

Learning outcomes:

The student will be able to:

- understand the basic principles underlying of dental imaging, panoramic (and other extraoral imaging) and intraoral imaging and perform a dental X-ray examination.
- knows how to write radiological referral and report.

The student shall have basic knowledge of the health effects of ionizing radiation and of the exposure of the patient to radiation based on which one can assume the responsibility for the justification and optimization of the procedure.

The student knows the importance of accurate diagnosis for successful treatment and radiographic appearances of

- normal anatomy, paranasal sinuses and temporomandibular joints
- dental anomalies
- dental caries, resorptions
- periodontal disease
- periapical inflammatory lesions
- infections (pericoronitis, osteomyelitis, osteonecrosis)
- findings in radiograph that may indicate complications during removal of the tooth
- most common cysts, benign tumors
- radiology of dental and facial traumas
- radiological features of malignant diseases

In addition:

Student is able to find and identify abnormal patterns in the diagnostic image such as cysts, benign tumors, other bone diseases, systemic diseases, and malignant diseases.

The student understands the benefits and limits and guidelines for the use of of dental basic imaging (dental panoramic, intraoral intraoral imaging), lateral cephalogram, extraoral projections and advanced imaging (CBCT) for the detection of disease or other abnormalities.

Mode of delivery:

Face to face

Learning activities and teaching methods:

Clinical practice (40 ects credits)

Target group:

Students in Dentistry 3rd, 4th and 5th years

Prerequisites and co-requisites:

- 091701A Clinical Training DC5
- 091702A Clinical Training DC6
- 091703A Clinical Training DC7
- 091704A Clinical Training DC8
- 091705A Clinical Training DC9
- 091706A Clinical Training DC10

Recommended optional programme components:

091761A Oral Radiology I (4 op)
 090185S-03 Oral Radiology II (1,2 op)
 090186S-01 Oral Radiology III (0,8 op)

Recommended or required reading:

Review of the theoretical and practicing materials in Oral radiology, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

In clinical practice OukaOpa app is used for self-assessment in Orthodontics based on national competences, clinical teachers will comment.

Grading:

Numeric scale 0-5

Working life cooperation:

Clinical practice is supervised patient work in Oral Radiology field of clinical Dentistry, City of Oulu.

091520A: Oral and Maxillofacial Surgery, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: György Sandor

Opintokohteen kielet: Finnish

ECTS Credits:

Final grade in the field of oral and maxillofacial surgery

Language of instruction:

Finnish

Timing:

After 5th year studies in the curriculum of Dentistry

Learning outcomes:

The final grade is a composite of clinical performance and the results of the final written examinations in surgery to ensure the goal of always safe clinical practice and the need for life-long learning.

Contents:

This study module contains:

091520A-01 Oral and Maxillofacial Surgery, final examination (0 Credits) and
 091520A-02 Oral and Maxillofacial Surgery, Clinical Training, grade (0 Credits)

Target group:

Students in Dentistry after 5th year studies in surgery

Assessment methods and criteria:

Weighted mean of the grades based on the contents and clinical work.

Grading:

Numeric scale 0-5

Person responsible:

Professor György Sándor and Petri Iso-Kungas

Working life cooperation:

Teaching clinic, Oulu city and Oulu University Hospital

Other information:

Final grade in Oral and Maxillofacial surgery in the curriculum Licentiate of Dentistry (330 ects credits).

Compulsory

091520A-01: Oral and Maxillofacial Surgery, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: György Sandor

Opintokohteen kielet: Finnish

ECTS Credits:

Grade in the field of Oral and Maxillofacial surgery

Language of instruction:

Finnish

Timing:

Autumn term 5th academic year

Learning outcomes:

Learning outcomes include the blending of knowledge from various courses in surgery to demonstrate a mastering of the discipline.

Contents:

091721A Oral and Maxillofacial Surgery I (4 credits)

090185S-05 Oral and Maxillofacial Rehabilitation (0,5 credits)

090185S-01 Oral and Maxillofacial Surgery II (3,3 credits)

090177A-05 Oral and Maxillofacial Surgery III (0,5 credits)

090186S-06 Oral and Maxillofacial Surgery IV (3,2 credits)

091823S Oral and Maxillofacial Surgery V (3 credits)

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Written examination

Target group:

Students in Dentistry in the 5th year

Prerequisites and co-requisites:

091701A Clinical Training DC5

091702A Clinical Training DC6

091703A Clinical Training DC7

091704A Clinical Training DC8

091705A Clinical Training DC9

Recommended or required reading:

Review of the theoretical and practicing materials in surgery, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

Written Examination

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor György Sándor and Petri Iso-Kungas

Working life cooperation:

Clinical know-how in surgery is part of competence in the final exam. Clinical practice is supervised patient work in Orthodontic field of clinical Dentistry, mainly growing patients and following special care treatment in the University hospital in Orthodontic field.

091520A-02: Oral and Maxillofacial Surgery, Clinical Training, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: György Sandor

Opintokohteen kielet: Finnish

ECTS Credits:

Clinical know-how in Oral and Maxillofacial Surgery

Language of instruction:

Finnish

Timing:

3. vsk kevätlukukausi ja 4. ja 5. vsk lukuvuodet (KLPH-vuorot)

Learning outcomes:

The student is expected to master safe considerate surgical technique and demonstrate a solid surgical knowledge base by the end of the course in order to receive a passing grade.

Contents:

Surgical care and management of the outpatient

Mode of delivery:

Blended teaching (web-based teaching + face-to-face teaching). Moodle.

Learning activities and teaching methods:

Face-to-face

Target group:

Students in Dentistry 3rd, 4th and 5th years.

Prerequisites and co-requisites:

091701A Clinical Training DC5

091702A Clinical Training DC6

091703A Clinical Training DC7

091704A Clinical Training DC8

091705A Clinical Training DC9

091706A Clinical Training DC10

Recommended or required reading:

Hupp, Ellis and Tucker, Contemporary Oral and Maxillofacial Surgery Fifth Edition Mosby St. Louis USA

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course. Grades for clinical performance are assigned according to clinical outcome.

Grading:

The course utilizes a numerical grading scale 0-5. In the numerical scale zero stands for a fail.

Person responsible:

Professor György Sándor and Petri Iso-Kungas

Working life cooperation:

Clinical practice is supervised patient work in surgical fields of clinical Dentistry, mainly growing patients and following special care treatment in the University hospital in surgery field.

Other information:

The score in Oral and Maxillofacial Surgery is based on clinical practice (40 ects credits).

091550A: Periodontology and Geriatric Dentistry, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pekka Ylöstalo

Opintokohteen kielet: Finnish

ECTS Credits:

Final grade in the field of Periodontology and Geriatric Dentistry (17 ects credits)

Timing:

After 5th year studies in the curriculum of Dentistry.

Learning outcomes:

Learning outcomes have been presented in the descriptions of individual courses.

Contents:

This study module contains:

091550A-01 Periodontology and Geriatric Dentistry, final examination (0 Credits)

091550A-02 Periodontology and Geriatric Dentistry, Clinical Training, grade (0 Credits)

Positive input of the thesis in the field.

Target group:

Students in Dentistry after 5th year studies in Periodontology and Geriatric Dentistry.

Assessment methods and criteria:

Weighted mean of the grades based on the contents.

Grading:

Numeric scale 0–5

Person responsible:

Professor Pekka Ylöstalo

Associate professor Anna-Maija Syrjälä

Working life cooperation:

Sirpa Anttila, Clinical teacher in the field of Periodontology, Teaching clinic, Oulu city

Other information:

Final grade in Periodontology and Geriatric Dentistry in the curriculum Licentiate of Dentistry (330 ects credits).

Compulsory

091550A-01: Periodontology and Geriatric Dentistry, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pekka Ylöstalo

Opintokohteen kielet: Finnish

ECTS Credits:

Grade in the field of Periodontology and Geriatric dentistry (0 ECTS cr)

Language of instruction:

Finnish

Timing:

Spring term 5th academic year

Learning outcomes:

1) Periodontology

- anatomy and physiology of periodontium

- clinical, radiological and microbiological diagnostics

- aetiology, pathogenesis, risk factors and classification of periodontal diseases

- epidemiology of periodontal diseases

- oral self-care and periodontal health promotion

- periodontal treatment methods and equipments

- periodontal aspects in occlusal rehabilitation of periodontally reduced dentition

– relation between periodontal diseases and management in relation to comprehensive dental treatment and general health

- periodontal surgery, indications of periodontal surgery
- immunological and non-immunological defence mechanisms of the periodontium
- system effects of periodontal infections
- diagnostics and treatment of peri-implant diseases

2) Geriatric Dentistry

- biological changes in cell, oral cavity, organs during aging, psychological and social changes during aging
- special features of geriatric dentistry, complication risks in dental health care among older patients
- diseases, medications and functional ability in treatment planning and patient care among older patients
- demography, epidemiology oral diseases and non-oral diseases of older patients
- nutrition
- aging theories

Contents:

All theoretical courses in Periodontology and Geriatric Dentistry and clinical training during C5–C10

Mode of delivery:

Face to face

Learning activities and teaching methods:

Written exam (3 hours) and feedback lecture

Target group:

Students in Dentistry in the 5th year

Prerequisites and co-requisites:

091701A Clinical Training DC5
 091702A Clinical Training DC6
 091703A Clinical Training DC7
 091704A Clinical Training DC8
 091705A Clinical Training DC9
 091706A Clinical Training DC10

Recommended or required reading:

Review of the theoretical and practicing materials, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

Written exam (3 hours) and feedback lecture

Grading:

Numeric scale 0–5

Person responsible:

Professor Pekka Ylöstalo
 Associate professor Anna-Maija Syrjälä

Working life cooperation:

Clinical practice is supervised patient work in Teaching Clinic of Oulu Health Centre (mainly comprehensive dental care patients) and following special care treatment in the University hospital. Training in Geriatric Dentistry takes place in municipal nursing homes of Oulu.

Other information:

Curriculum based updating exam (theory and clinical skills).

091550A-02: Periodontology and Geriatric Dentistry, Clinical Training, grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Pekka Ylöstalo

Opintokohteen kielet: Finnish

ECTS Credits:

Clinical know-how in Periodontology

Language of instruction:

Finnish

Timing:

3rd, 4th and 5th academic years (KLPH)

Learning outcomes:

Upon completion of the studies in the field of Periodontology and Geriatric Dentistry the student will be able to

1) Periodontology

- perform clinical examination, radiological examination and microbiological test, and make a diagnosis
- make treatment plan and perform risk assessment
- understand periodontal condition as a part of individual's health
- take into account patient's other diseases and medications (periodontal medicine)
- health promotion at individual and population level
- give information on aetiological causes of periodontal diseases and empower of patients
- remove biofilm, calculus and plaque retentions and scaling and planning using hand instruments and power-driven instruments
 - among patients with early and moderate clinical attachment loss
 - non-furcation surfaces and accessible furcation surfaces among patients with severe attachments
- advance
- assess the benefits of medication in periodontal disease
- rehabilitate occlusion of periodontal patients including splinting
- assess the treatment outcome, perform risk assessment and planning maintenance treatment
- diagnose peri-implant diseases, treat peri-implant diseases non-surgically and give maintenance treatment of implants
- assess the indications and contraindications of periodontal surgery and discuss of them with patients
- make minor periodontal surgical operations and take care of postoperative treatment
- give comprehensively dental care and give periodontal treatment that is consistent with the condition of patients non-oral health
- to identify the limits of own skills and make referral
- understand the health care need and disease burden at the population level

2) Geriatric Dentistry

- assess the ability to function of older people and its effect on dental treatment
- identify and take in account the age-dependent changes in oral cavity in patient care
- diagnose the age-related changes in oral cavity
- make treatment plan for older patients
- diagnose and treat complications of dental care among older patients
- identify the effect of drugs and their interactions among older patients
- capable to cooperate with other health professionals

Contents:

The basic contents of the course:

1) Periodontology

- periodontal diagnosis and risk factors
- assessment of treatment need
- periodontal treatment plan, preventive and non-surgical treatment
- comprehensive treatment of periodontal patients
- familiarization with periodontal surgery
- maintenance care of periodontal patients
- cooperation with oral hygienists
- familiarization with special health care

2) Geriatric Dentistry

- aging processes in oral cavity
- diagnosis of oral diseases among older people
- considerations of functional ability in the treatment and planning of dental care among older patients
- aging and medication
- principles of palliative oral health care

Mode of delivery:

Face-to-face

Learning activities and teaching methods:

Clinical practice (40 ects credits)

Target group:

Students in Dentistry 3rd , 4th and 5th years

Prerequisites and co-requisites:

091701A Clinical Training DC5
 091702A Clinical Training DC6
 091703A Clinical Training DC7
 091704A Clinical Training DC8
 091705A Clinical Training DC9
 091706A Clinical Training DC10

Recommended optional programme components:

Theoretical courses of Periodontology and Geriatric Dentistry

090182A-01 Introduction to Clinical Work, Radiology I
 091791A Diseases of oral mucosa
 091833S Dental Implantology I
 091834S-02 Dental Implantology II
 090174S Internal Medicine for Dental Students

Recommended or required reading:

Review of the theoretical and practicing materials in, clinical practice and know-how in Teaching clinic, Oulu City and Oral and Maxillofacial Department, Oulu University Hospital.

Assessment methods and criteria:

In clinical practice, according the learning outcomes of DC6- DC10. OukaOpa app is used for self-assessment that are based on national competences.

Grading:

Numeric scale 0-5

Person responsible:

Professor Pekka Ylöstalo
 Associate professor Anna-Maija Syrjälä

Working life cooperation:

Clinical practice is supervised patient work in Teaching Clinic of Oulu Health Centre (mainly comprehensive dental care patients) and following special care treatment in the University hospital. Training in Geriatric Dentistry takes place in municipal nursing homes of Oulu.

Other information:

The score in Periodontology and Geriatric Dentistry is based on clinical practice (40 ects credits).

091530A: Prosthetic Dentistry and Stomatognathic Physiology, final grade, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Course

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kirsi Sipilä

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits

Language of instruction:

Finnish

Learning outcomes:

Students know the normal anatomic structures and the abnormalities of the stomatognathic system. Student can perform the clinical examination and conservative stomatognathic treatment based on the diagnosis.

Student can perform the prosthetic treatment using fixed tooth-supported fixed prostheses and removable prostheses. Student knows the dental materials used in prosthodontics and can perform simple prosthetic repairs. Student knows the possibilities of the prosthetic rehabilitation in advanced cases, including restorations supported on implants.

Student has an understanding of different pain conditions in head and face, he/she understands the need for multidisciplinary collaboration in diagnostics and treatment of pain patient and can refer the patient to consultation for other medical specialty when necessary.

Contents:

Courses on stomatognathic physiology, fixed prosthodontics (onlays, veneers, tooth-supported crowns and fixed dental prostheses), removable prosthodontics (partially and totally edentulous jaw), implant dentistry

Target group:

Pregraduate dental students

Assessment methods and criteria:

Final examination and the grade of the clinical training

Grading:

1 - 5

Person responsible:

Professor Kirsi Sipilä and senior lecturer Ritva Näpänkangas

Working life cooperation:

Working life cooperation during courses

Compulsory

091530A-01: Prosthetic Dentistry and Stomatognathic Physiology, final examination, 0 op

Voimassaolo: 01.08.2019 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Kirsi Sipilä

Opintokohteen kielet: Finnish

ECTS Credits:

0 ECTS credits

Language of instruction:

Finnish

Learning outcomes:

Students know the normal anatomic structures and the abnormalities of the stomatognathic system. Student can perform the clinical examination and conservative stomatognathic treatment based on the diagnosis.

Student can perform the prosthetic treatment using fixed tooth-supported fixed prostheses and removable prostheses. Student knows the dental materials used in prosthodontics and can perform simple prosthetic repairs. Student knows the possibilities of the prosthetic rehabilitation in advanced cases, including restorations supported on implants.

Student has an understanding of different pain conditions in head and face, he/she understands the need for multidisciplinary collaboration in diagnostics and treatment of pain patient and can refer the patient to consultation for other medical specialty when necessary.

Contents:

Courses on stomatognathic physiology, fixed prosthodontics (onlays, veneers, tooth-supported crowns and fixed dental prostheses), removable prosthodontics (partially and totally edentulous jaw), implant dentistry

Target group:

Pregraduate dental students

Assessment methods and criteria:

Final examination

Grading:

fail, 1 - 5

Person responsible:

Professor Kirsi Sipilä and senior lecturer Ritva Näpänkangas

091530A-02: Prosthetic Dentistry and Stomatognathic Physiology, Clinical Training, grade, 0 op**Voimassaolo:** 01.08.2019 -**Opiskelumuoto:** Intermediate Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail**Opettajat:** Kirsi Sipilä**Opintokohteen kielet:** Finnish**ECTS Credits:**

0 ECTS credits

Language of instruction:

Finnish

Timing:

3rd – 5th year of the studies

Learning outcomes:

Student can do the clinical stomatognathic examination and the stomatognathic treatment based on the diagnosis. Student can perform the prosthetic treatment using fixed tooth-supported fixed prostheses and removable prostheses. Student can perform simple prosthetic repairs.

Contents:

Clinical training in 3rd – 5th year of dental studies

Mode of delivery:

Clinical training

Target group:

Pregraduate dental students

Assessment methods and criteria:

Clinical assessment

Grading:

fail, 1 - 5

Person responsible:

Professor Kirsi Sipilä and senior lecturer Ritva Näpänkangas

Tutkintorakenteisiin kuulumattomien opintokokonaisuuksien ja -jaksojen kuvaukset

090171A-01: Introduction to Development of Occlusion and Orthodontics, 0 op

Voimassaolo: 01.08.2017 -**Opiskelumuoto:** Intermediate Studies**Laji:** Partial credit**Vastuuyksikkö:** Dentistry**Arvostelu:** 1 - 5, pass, fail

Opettajat: Pirttiniemi, Pertti Mikael

Opintokohteen kielet: Finnish

ECTS Credits:

0 (part of 3 ECTS cr study module, corresponds to 0,5 ECTS credits workload)

Language of instruction:

Finnish

Timing:

1st study year. It is recommended to complete the course at the beginning of studies.

Learning outcomes:

Student can observe normal craniofacial growth and development. Student can consider different factors effecting the development of the occlusion.

Contents:

Introduction to Orthodontics

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures, group work, discussion. 8 hours

Target group:

1st year dental students

Prerequisites and co-requisites:

No required studies beforehand.

Recommended optional programme components:

-

Recommended or required reading:

Handouts of the lectures

Assessment methods and criteria:

Participating the lectures

The course is included in the final examination of oral development and orthodontics.

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

Professor Pertti Pirttiniemi

Working life cooperation:

No

Other information:

-

090171A-02: Organization and Providers of Oral Health Care Services, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 3 ECTS cr study module, corresponds to 0,5 ECTS credits workload

Language of instruction:

Finnish

Timing:

1st study year

Learning outcomes:

Upon completion of the course, the student will be familiar with

- oral health care personnel and main collaborators, organizations and providers of oral health care services in Finland
- the principles and importance of health promotion

- the main oral diseases and basic principles of oral self-care

Contents:

Oral health care personnel and main collaborators, organizations and providers of oral care in Finland, principles of health promotion, main oral diseases and oral self-care

Part of the teaching is integrated at C1 with the teaching of Department of Public Health Science and General Practice.

Mode of delivery:

Contact teaching

Learning activities and teaching methods:

Lectures 3.5 h, visit to public dental care, learning diary

Target group:

1st year dental students

Prerequisites and co-requisites:

No

Recommended optional programme components:

043037P Public health

Recommended or required reading:

Materials given during the course

Assessment methods and criteria:

The assessment of the course is based on the learning outcomes of the course

Read more about [assessment criteria](#) at the University of Oulu webpage.

Grading:

The course unit utilizes verbal grading scale pass/fail.

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD, DDS Anna-Maija Syrjälä

Working life cooperation:

Visit to health care center

Other information:

Course is part of Basic knowledge and skills in dentistry strand

090171A-03: Tooth Morphology, 0 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Intermediate Studies

Laji: Partial credit

Vastuuyksikkö: Dentistry

Arvostelu: 1 - 5, pass, fail

Opettajat: Marja-Liisa Laitala

Opintokohteen kielet: Finnish

ECTS Credits:

Part of 3 ECTS or study module, correspondents to 2,0 ECTS credits workload

Language of instruction:

Finnish

Timing:

1st year spring semester

Learning outcomes:

Upon completion of the course, the student:

- has basic knowledge on the anatomy and morphology of dentition and teeth
- is able to identify different types of teeth and dentitions

Contents:

Different types of teeth and dentitions, dentition as a part of masticatory organ, anatomy and morphology of teeth

Mode of delivery:

Face-to-face teaching

Learning activities and teaching methods:

Lectures integrated into hands-on exercises, 100% attendance required

Target group:

First year dental students

Prerequisites and co-requisites:

-

Recommended optional programme components:

-

Recommended or required reading:

Material given during the course, voluntary text book: : Berkovitz BKB, Holland GR, Moxham BJ. A color atlas & textbook of oral anatomy. pp. 10–24.

Assessment methods and criteria:

Hands-on exercises, exam

Read more about assessment criteria at the University of Oulu [webpage](#).

Grading:

The course unit utilizes verbal grading scale pass/fail

Person responsible:

PhD, DDS Marja-Liisa Laitala, PhD Raija Vainionpää

Working life cooperation:

-

Other information:

Course is part of Basic knowledge and skills in dentistry strand