

Course Syllabus

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|----------------|---|-----------------|
| 3200760 | <p>Academic Writing</p> <p>ACAD WRITING</p> <p>Abstract and summary writing; organizing ideas and paraphrasing; writing research results; describing tables figures or graphs and providing references; writing short research reports; revising reports based on reviewers' comments.</p> | 1(1-0-3) |
| 3206721 | <p>General Orthodontics</p> <p>GEN ORTHO</p> <p>The study of general orthodontics. Insight in etiology of malocclusion comprises genetic and environmental factors that influence post-natal development of the dentition and facial growth. Knowledge of unfavorable influence of these factors and their interaction. Competent to diagnostic procedures comprises obtain a relevant patient history, perform a thorough clinical examination, determine habitual occlusion, evaluate functional occlusion, and different jaw relationship of patients, evaluate influence of functional component of soft tissues on dento-facial morphology, take high quality impression of the dentition, make face bow registration and mount dental casts in an articulator, take good extra-oral and intra-oral photographs. Competent to arrive at a proper diagnostic assessment, define treatment objectives and treatment plan for various types of orthodontic and dento-facial abnormalities including strategy of treatment and retention, therapeutic measures, timing and sequence of the application prognosis and estimated treatment and retention time.</p> | 1(1-0-3) |
| 3206722 | <p>Essential Orthodontics</p> <p>ESSEN ORTHO</p> <p>The study of essential orthodontics. Knowledge of development of the dentition comprises the development of normal occlusion and its variations from birth to adulthood. Competent to recognize and identify a given situation of the dentition in terms of normality and abnormality; developmental stage attained; future development and possibility for interceptive measures to improve the final situation. Knowledge of facial growth comprises growth sites in the craniofacial skeleton; post-natal growth changes in craniofacial region and soft tissues; variation in the function of the components in relation to facial growth; individual variation in facial</p> | 2(2-0-6) |

configuration and influence of environmental factors on facial growth. Knowledge of aspects of tooth movements comprises: effect of different types of force application on cells and tissues; influence of force system and magnitude and post treatment changes. Knowledge of orthodontic materials comprises: parameters for selection of correct material for orthodontic procedures; proper handling and application of orthodontic materials. Insight in property and composition of orthodontic materials. Competent to orthodontic biomechanics comprises: understand basic principles of statics and mechanics of materials; solve problems related to force resultants and force equivalents, estimate force produced by different orthodontic/orthopedic appliances.

3206723*	Orthodontic Techniques ORTHO TECH	3(3-0-9)
	<p>Knowledge of indication, design, use and limitation of removable appliances, functional appliances, various types of extraoral appliances and combined extraoral/functional appliances. Competent to construct and repair removable and functional appliances. Insight in indication and application of fixed appliances, different concepts and treatment approaches in design and biomechanical principles of fixed appliance techniques (Edgewise technique, Bioprogressive technique, Straight wire technique, Begg technique, Segmented arch technique) potential and limitation of each technique. Knowledge of indication and contra-indication, design, use and limitation of retention appliances as well as the most appropriate duration of retention.</p>	
3206724	Multidisciplinary Treatment Procedures MULTI TREAT PROCE	2(2-0-6)
	<p>The study of multidisciplinary treatment procedures. Insight in multidisciplinary approaches in the treatment of cleft lip and palate patients comprises indication, timing, and application of multidisciplinary treatment of cleft patients and specific of orthodontic treatment in cleft patients. Knowledge of orthodontic-surgical treatment comprises indication and application of combined orthodontic-surgical treatment, specific aspects of orthodontic treatment in patients requiring orthognathic surgery. Knowledge of orthodontic-periodontal treatment comprises indication and contra-indication of orthodontic treatment in periodontal patients, specific aspects of orthodontic treatment in periodontally compromised dentition and contribution of orthodontic treatment to periodontal patients. Knowledge of orthodontic-restorative</p>	

treatment comprises indication and application of combined orthodontic-restorative treatment, specific aspects of orthodontic treatment in combined orthodontic-restorative patient care. Knowledge of adult orthodontics comprises indication and specific aspects of orthodontic treatment of adults in collaboration with general practitioners. Knowledge with craniomandibular dysfunction comprises etiology, various treatment procedures, indication and contra-indication for orthodontic treatment in these patients.

- 3206741** Orthodontic Practical Exercise **1(0-3-1)**
 ORTHO PRAC EXER
 Practical exercises for competent to: construct of removable and functional appliances; wire bending and treatment on typodont for Class I, Class II malocclusions with various fixed appliance techniques and competent to evaluate the treatment effect of specific mechanics as related to each technique.
- 3206751** Seminar in Basic Orthodontics **1(1-0-3)**
 SEM BASIC ORTHO
 Seminar in basic orthodontics comprises craniofacial growth, etiology of malocclusion, orthodontic diagnosis and treatment planning, treatment mechanics, treatment result and its relapse. The student can realize gap of knowledge that can be solved by research means.
- 3206752** Seminar in Advanced Orthodontics **1(1-0-3)**
 SEM ADV ORTHO
 Seminar in advanced orthodontics comprises the effect of treatment mechanics on tissue responses, three dimensional orthodontic analysis, orthodontic innovations for the best effective treatment. The student can discuss orthodontic problems and related fields so that these problems can be solved by the deeply investigation.
- 3206779** Photography and Computer in Orthodontics **1(1-0-3)**
 PHOTO COMP ORTHO
 Dental photography including selection of a camera, lense and film, a digital camera suitable for taking dental photographs; excellent photographic results in daily dental practice, further studies and research. Use of microcomputer under operating system; program application for spreadsheets in clinical management; inventory system;

medical records; word processing; statistical analysis for research; computerized cephalometric analysis for orthodontic treatment.

- 3206894** Doctoral Dissertation Seminar
 DOC DISS SEM
 Presentation and discussion on articles related to the doctoral dissertation to realize research problems, conclusions of the previous studies on materials and methods, results of the studies that still require further investigations so that new knowledge beneficial for orthodontic field can be obtained.
- 3206941** Orthodontic Clinical Training I **2(0-6-2)**
 ORT CLI TR I
 Clinical training for competent to obtain a relevant patient history and compliant, perform clinical examination, take high quality of orthodontic records, arrive at a proper diagnostic assessment on the basis of data, define treatment objectives with alternative consideration, define treatment plan and perform effective treatment. Each postgraduate student must start at least 30 well-documented patients with various types of malocclusion.
- 3206942** Orthodontic Clinical Training II **1(0-3-1)**
 ORT CLI TR II
 Clinical training for competent to monitor tooth movement during treatment with specific biomechanics, evaluate treatment progress and detect the unfavorable side effect.
- 3206943** Orthodontic Clinical Training III **4(0-12-4)**
 ORT CLI TR III
 Clinical training for competent to monitor tooth movement with specific biomechanics, manage transferred cases with active treatment and detect treatment changes by analysis of tracings obtained at the critical stages of treatment.
- 3206944** Advanced Orthodontic Clinical Training I **1(0-3-1)**
 ADV ORT CLI TR I
 Clinical training for competent to manage orthodontic patients who require multidisciplinary approach and alternative treatment with new technology and modern appliances

- 3206945** Advanced Orthodontic Clinical Training II **3(0-9-3)**
ADV ORT CLI TR II
Clinical training for competent to provide advice after clinical examination concerning: feasibility of treatment, more analysis needed for treatment planning or consultation of other specialists for further evaluation and treatment. Additionally competent to provide effective multidisciplinary treatment with favorable result.
- 3206949** Advanced Orthodontic Clinical Training III **1(0-3-1)**
ADV ORT CLI TR III
Clinical training for competent to provide final stage of treatment for complete case or referred case, preparation well-document records and evaluation for both complete cases as well as referred cases.
- 3206965** Skill in Orthodontic Teaching **1(0-3-1)**
SKILL ORTHO TCHG
Practice in teaching undergraduate dental students for experience in teaching and promotion of communication skill. The postgraduate student can pass on clinical and laboratory orthodontic knowledge effectively