29331 - Orthodontics

Información del Plan Docente

Academic Year	2016/17
Academic center	229 - Facultad de Ciencias de la Salud y del Deporte
Degree	442 - Degree in Odontology
ECTS	12.0
Course	4
Period	Annual
Subject Type	Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process that is designed for this subject is based on the following:
Learning activities scheduled
1. Attended class (45h)
participative magisterial presentation of content through presentation and explanation of teacher with student dialogue. questions will be raised to establish Based Learning Problems, doubts will be resolved, etc.
Thematic exhibitions will be supported by diagrams and illustrations by PowerPoint presentations. This material will be provided to students through photocopies. In certain thematic blocks additional material will be provided and will encourage the realization of concept maps in order to achieve deeper learning.
2. Seminars and directed works (15h)

seminars will be held, in the form of theoretical and practical workshops taught by the teacher or invited speakers to deepen topics of special interest.
These activities will provide analysis and research topics. search procedures of information via the Internet will be established, methods of analysis and synthesis of knowledge will be taught. General basic principles of biostatistics will be explained. Work will be done individually or in groups.
3. Practical sessions
Composed of a series of activities that combine individual work and teamwork. They will develop in the preclinical classroom. exercises and work done to be evaluated and will be a theoretical and practical test at the end of each module is presented. Attendance at practices is mandatory.

Classroom sessions (15h): case studies of patients will be resolved and the various diagnostic criteria and treatment plan will be presented. The literature review include: searching, reading, study, abstract and oral presentation. related to the agenda that is taught in lectures at that time items will be discussed. These items will be of publications in high impact journals, and both classic themes such as orthodontic be reviewed. - Laboratory sessions (25h): The student will make actual patient records, study models and cephalometric. a diagnostic and therapeutic simulation will. orthodontic wires are handled, preparing all the appliances used in clinic. 4. Self study (100h) Distnace student work, including information search, job preparation, clinical cases and proposed exercises, study and exam preparation. 5. Tutoring Devoted to answer questions or provide specific bibliography of a specific topic in relation to the theoretical and practical contents of the subject. the proposed monitoring group work and individual correction work will be performed. The tutorial will take place both in classroom and non-classroom (via telematics via e-mail)

5.2.Learning activities

The program that the student is offered to help you achieve the expected results includes the following activities ...
LECTURES

PRACTICE

SEMINARS

1. INTRODUCTION TO BLOCK ORTODONCIA
Concept, origin and evolution of Orthodontics
Orthodontic concept. Origin and historical evolution. Relationship with other branches of science. Periods. European and American schools. Orthodontics today. social and health needs.
BLOCK 2. NORMAL
Normality tooth.
Concept dental arch. Tooth position in the arcades. Differences between adult arcade arcade and development. Arcade and forms relationships with skeletal structures and function. Giroversión of permanent molars.
Occlusion concept. Sagittal, vertical and lateral relations. occlusal curves. interproximal relations. axial inclinations. Keys occlusion.
facial and skeletal normal.
Rating aesthetics: front and profile. anthropometric indexes and craniometric. Proportionality. auric proportions. Symmetry. dentolabial analysis. Smile line. dental aesthetics.
normal function.
Different functions of the oral cavity: chewing, swallowing, breathing, speech and expression mimicry. postural head position.
BLOCK 3. MALOCCLUSION and dysplasias BONE
Concept of malocclusion and skeletal dysplasias.
Definition of malocclusion. Definition of bone dysplasias. Orthodontic and orthopedic terminology.
Classification of malocclusions and skeletal dysplasias
Classification systems: Types of Dewey-Anderson. Angle classification. Classification Lisher. Simon classification. Carrea classification. Other systems.
Types of problems: Sagittal problems: class I, class II and class III. Cross-cutting issues: cross bite scissor bite. Vertical

problems overbite and open bite. dental and functional asymmetries.
Sagittal problems syndrome Class I, Class II and Class III. crosscutting issues maxilla and mandible. Vertical problems: facial growth patterns or types. skeletal asymmetries.
Alterations in the growth of the jaw. Morphology and terminology. Hipocrecimiento and hipercrecimientos. Mandibular rotations.
SECTION 4: GROWTH
overall growth
General. Concepts of growth and development. Growth pattern. Study methods of growth. Rating growth. Growth curves. Bone growth mechanisms. determinants of growth. Theories of growth.
craniofacial growth.
Growth vault and skull base.
Nasomaxillary complex growth: prenatal development, displacement and remodeling, sequential growth.
Jaw growth: prenatal development, structural units of the jaw, body and branch growth. Early growth. Remodeled. mandibular rotation. Morphogenetic facial pattern.
Integration of dentofacial growth: general structure of the facial skeleton, equivalent growth, predicting growth, maturation in the adult.
BLOCK 5: ERUPTION TOOTH
Tooth formation and mechanisms of tooth eruption
Tooth formation: general concepts. Study methods. Embryology. proliferative period. Calcification period. tooth movement and rash. tooth eruption in adults.
Mechanisms of tooth eruption. Rash assumption. vascular hypothesis. Hypothesis dental follicle. Root growth. Role of the periodontal ligament. Clinical aspects of the eruption.
Pathophysiology of eruption.
General concepts and terminology. delayed eruption. local and systemic factors. Impaction and retention of the eruption. Transpositions and transmigration. Ankylosis. Diagnosis and generalities about treatment.
primary teeth.
Stages of tooth development in tooth eruption. Order and chronology. Positional changes during the eruption. Development of temporary arcades. Relationship with reflections, functions and craniofacial structures.
mixed dentition phase.
Eruption of first permanent molars. Normal patterns of eruption, distal step. molar class. Eruption of incisors. Normal patterns of eruption of incisors. Impact on the arches and occlusion. Relationship with the craniofacial complex.
second phase mixed dentition and permanent dentition.
Eruption of premolars and canines. Space drift. Normal patterns of eruption. Impact on the arches and occlusion. Discrepancies later. Relationship with the craniofacial complex. Unerupted canine pathology: abnormal path eruption, inclusions and deductions, etiology and diagnosis. Eruption of second molars.
adult permanent dentition.
Maturation of the dental arches. Eruption of third molars. Aging dentition. Attrition. tooth loss. Periodontal disease. Consequences occlusion.
BLOCK 6: DIAGNOSIS IN ORTHODONTICS
History and exploration.
History and anamnesis. intraoral examination: dental analysis and analysis of soft tissue (labial and lingual bridles, periodontal diagnosis of orthodontic problems: gingival recession and juvenile periodontitis). extraoral examination. functional and parafunctional exploration. Exploring ATM: anatomy, centric relation, functional occlusion, ATM infant pathology, joint or muscle classification, differential diagnosis complementary examinations. Study models. Radiographs: panoramic, cephalometric and wrist. clinical picture.
cephalometry
Introduction to cephalometric: concept and history. Various methods of cephalometric analysis and interpretations. Steiner cephalometric and Ricketts. Overlays.
Integration diagnostic and treatment plan.
Integration of clinical data obtained. Drawing up a list of problems.
BLOCK 7: ETIOPATHOGENESIS malocclusions and dysplasias BONE
Etiopathogenesis of malocclusions and skeletal dysplasias: General factors.
Concept of balance and coping mechanisms. Classification of causes. skeletal muscle and dental factors. Forms of action. Genetics of malocclusion.
Etiopathogenesis of malocclusions and skeletal dysplasias: Local factors.
dental anomalies of number, size and shape. Tooth loss. environmental influences. harmful habits: digital, lip or suction objects, child swallowing and oral breathing. Lingual alterations.

THEMATIC 8: MOVEMENT IN DENTISTRY AND BIOMECHANICS
tooth movement
Tissue reaction to orthodontic forces: pressure side and voltage, direct and indirect bone resorption. direct and indirect bone apposition. Types of force by tooth movement.
Unwanted effects of orthodontic forces: Iatrogenic, pain, root resorption and necrosis.
Biochemistry of orthodontic movement: bioelectric phenomena of alveolar bone. Prostaglandins and inflammatory mediators. Cytokines and bone remodeling.
Biomechanics
Basics: strength, centroid, moment of a force. Types of force. Systems forces. Deformation of bodies against a force. differential forces. Types of controlled movement. Friction.
Anchor concept. Anchor types and sources.
Orthodontic Materials
Materials used in Orthodontics: composition and types of alloys. Bands, brackets, elastomers, wires and pliers. Allergic reactions in orthodontics.
PRACTICAL CONTENTS
MODULE 1 STUDY OF ARCADE AND OCCLUSION
Impression and emptying models. I zocalado. History and exploration. Study models
MODULE 2. INTRODUCTION TO radiographic diagnosis
Study panoramic radiography. Anatomical study of the lateral radiograph of the skull. Cephalometric tracing: points, planes, lines and axes. Cephalometric Steiner. Ricketts cephalometric. diagnostic synthesis
3. MANAGEMENT MODULE WIRE
Figures thick steel. Figures thin steel. Preparation of steel arches 016. Production of steel arches with omegas 016
BIBLIOGRAPHIC REVISIONS

5.3.Program

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5.4.Planning and scheduling

Schedule sessions and presentation of works
The schedule of practical sessions and dates for the defense of the work will be communicated at the beginning of the course.
Resources
Places where the subject will be taught
Theoretical classes : to be confirmed
Practical classes:
- Sessions in classroom: to be confirmed
- Laboratory sessions : Aula pre -clinical and laboratory classroom

5.5.Bibliography and recomended resources

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