# INTRODUCTION

### The Full Face Philosophy: a 2-Year Orthodontic Program

This program consists of structured learning modules, which include lectures, practical components, live patient demonstrations, and take home assignments

#### Course Outline:

COURSE 1:	Orthodontic Diagnosis
Course 2:	Cephalometrics/ Radiography
Course 3:	Mixed Dentition treatment
Course 4:	Class II Correction OSA/ Snoring
Course 5:	Class III Correction
Course 6:	Straightwire Mechanics
Course 7:	High angle Malocclusions
Course 8:	Perio/Ortho interface
Course 9:	Biomechanics
Course 10:	Surgical Orthodontics
Course 11:	Esthetic Appliances
Course 12:	Management of TMD Stability/Retention

The practical segment of the course provides "hands on" instruction in the following areas:

- Cephalometric tracing
- Model analysis
- Bracket placement
- Wire bending
- Construction of utility arches
- Fitting and adjusting functional appliances
- Fitting Reverse Pull Facemasks
- Canine Exposures
- Fitting and Adjusting Occlusal Splints
- Invisalign Treatment
- Bonding Fixed Retainers
- Airway Evaluations
- Indirect bonding for Lingual Appliances
- Placing Micro-Implants

# COURSE 1: ORTHODONTIC DIAGNOSIS



#### **PROGRAM HIGHLIGHTS:**

Doctors will be shown how to take proper orthodontic records including, study models, intra-oral and extra-oral photographs.

The records will then be analyzed to breakdown the diagnosis into one of 36 possible malocclusion types.

A treatment plan will be formulated to divide the orthodontic problems into functional influences, orthopaedic concerns and orthodontic considerations.

Doctors will be given a thorough overview of dentofacial growth and facial aesthetics.

- Introduction to contemporary orthodontic treatment objectives
- Difference between traditional and functional Orthodontics
- Skeletal classificationsystem
- Dental division
- Vertical dimension of the face
- Assessing facial growth
- Myo-functional problems



- Airway evaluation
- Evaluation of the TMI
- Introduction to cephalometrics
- Benefits of early orthodontic intervention
- Aetiology of malocclusions
- Informed consent
- Growth of the maxilla
- Growth of the mandible
- Arch development techniques
- Preventing impacted canines
- Treatment of tongue tie
- Evaluation of the smile line
- Introduction to computerized software to aid diagnosis and treatment planning



#### **PROGRAM HIGHLIGHTS:**

Doctors will be shown how to take a proper frontal and lateral cephalometric radiographs.

These radiographs will be analyzed to look at soft tissue problems, vertical dimensions of the face and predict remaining facial growth.

Doctors will be able to assess soft tissue and hard tissue in regards to the divine proportion ratio.

- Review of radiation doses
- Most common cephalometric analyses
- Frontal PASkull analysis including Tri-planar approach
- Introduction to radiography of the TMJ
- Spiral CT Radiographs to locate impacted teeth
- Growth rotation patterns as per Bjork and Skieller
- Quadrilateral analyses (Jarabak ratio)
- Cervical posture
- Divine proportion (Facial Beauty)

- Archial cephalometric analysis (Jefferson technique)
- Ricketts esthetic plane
- Forecasting need for maxillary expansion using a frontal PASkull radiograph
- Evaluating dental and skeletal midlines
- Occlusal cants
- Facial Asymmetry
- Para nasal airway
- Cephalometric Superimpositions to monitor Skeletal & Dental changes
- Skeletal maturation determined by cervical vertebrae development
- Overview of CBCT



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# COURSE 3: TREATMENT IN THE

MIXED DENTITION/MYOFUNCTIONAL THERAPY



#### **PROGRAM HIGHLIGHTS:**

The identification, evaluation, control, and neutralization of worsening factors in a developing malocclusion.

Review of growth patterns and a rational choice of diagnostic and therapeutic treatment procedures.

Doctors will be shown how to minimize skeletal, dentoalveolar and muscular problems by the end of the transition to the permanent dentition.

#### **PROGRAM OUTLINE:**

- Interceptive orthodontics
- Growth modification
- Patient co-operation
- Early treatment philosophy
- Age 3-7 diagnosis and treatment
- Oral habits: thumb, tongue, pacifier
- Posterior cross bite
- Anterior cross bite
- Allergies, adenoids and airways
- Eruption problems

- - Harmonizing width of the dental arches
  - Improving speech problems
  - Simplifying and/or shorting treatment time for later corrective orthodontics
  - Reducing the likelihood of impacted permanent teeth
  - Maintaining leeway space
  - Myo-functional therapy
  - Maintaining early treatment changes as the face matures
  - Interceptive therapies in Class III malocclusions
  - Planas direct tracks technique
  - Treatment and prevention of craniomandibular disorders in pediatric dentistry
  - Prevention and treatment of periodontal problems in interceptive orthodontics
  - Prevention and treatment of dental trauma

2x4 Straightwire appliance in mixed dentition

### COURSE 4: CLASS II CORRECTION

Stability of Class II correction

The functional matrix theory

#### **PROGRAM HIGHLIGHTS:**

Correcting Class II problems via growth modification, camouflage using orthodontic tooth movement, or surgical correction.

Reviewing the evidence based literature associated with the use of functional appliances.

Difference between treating a high angle Class II malocclusion which involves limiting posterior dental and skeletal vertical development vs. low angle Class II correction, which encourages forward mandibular growth rotation.

- Understand the way functional appliances "work" and recognise their limited effect on mandibular growth
- Non-compliance Class II treatment
- Timing of Class II correction
- Removable functional appliances
- Fixed functional appliances (bite jumpers)
- Treatment of high angle Class II problems
- Case finishing post functional treatment
- Extraction versus non extraction treatment philosophies and the controversies associated with this treatment i.e. effect on the face and the TMI



### COURSE 5: CLASS III CORRECTION



#### **PROGRAM HIGHLIGHTS:**

Analysing appropriate records to differentiate between a midface deficient Class III patient that would benefit from early treatment vs. a true increased mandibular discrepancy that may require surgical correction at a later date.

Understanding the evidence based literature associated with reverse pull facemask therapy and determining the appropriate appliance that would stimulate maxillary sutures as we protract the maxilla.

Understanding mandibular growth and the importance of longterm retention, particularly in teenage boys.

#### PROGRAM OUTLINE:

- Functional influences that contribute to the formation of a Class III Malocclusion
- Mid face deficiency verus true mandibular prognathism
- The role of maxillary sutures
- Orthopaedic objectives for a Class III patient
- Fixed development appliances versus removable upper 3D appliances



- Are chin cups Effective?
- Reverse pull facemask selection
- Maintaining early Class III Orthopaedic correction
- The Vesco Arch for torquing upper incisors
- Medico legal consent form for late mandibular growth
- Straightwire biomechanics for the Class III patient
- Surgical Class III Correction
- Distraction osteogenesis
- The role of lingual frenectomies
- Diagnosis and treatment of Pseudo Class III malocclusions
- Retention philosophy for the Class III malocclusion
- Frankel III appliance
- Interceptive Class III intervention in the full deciduous dentition

Mandibular holding arches

# COURSE 6: STRAIGHTWIRE MECHANICS

#### **PROGRAM HIGHLIGHTS:**

A doctor will be able to select the appropriate straightwire prescription for the malocclusion they are treating.

Cases will be presented demonstrating archwire selection and utilization, mechanics planning, finishing procedures and post deband analysis of treatment results.

The participant will come to understand not only the "how to", but also the rationale and basis for the countless decisions one must make during straightwire therapy.

- Review of the most popular straightwire prescriptions
- Andrews 6 keys of occlusion
- ROTH Vs. MBT Vs. DAMON
- Bracket design to increase the inter bracket distance
- Self-ligating brackets i.e. passive, active or interactive designs
- Friction and the difference between sliding and looped mechanics
- Forces in orthodontics
- Archwire selection and progression
- Review of archwire alloys i.e. nickel titanium, beta titanium and stainless steel
- Direct bracket placement
- Indirect bonding



- Banding of molars and associated separator techniques
- Ceramic brackets
- Debonding
- Elastic usage
- Molar uprighting
- Air-rotor striping
- Distal driving
- Anchorage control
- Overjet reduction
- Space closure
- Case finishing



### COURSE 7: DIAGNOSIS AND TREATMENT OF THE INCREASED VERTICAL DIMENSION



#### **PROGRAM HIGHLIGHTS:**

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A doctor will be able to differentiate between a true vertical growth patient as opposed to a patient whose vertical dimension are increased due to environmental factors.

There will be a review of the process of facial growth and dento-alveolar compensation that leads to an increased vertical proportion with or without an anterior open bite.

Understand the effect of proper diagnosis and treatment planning, and intrusion biomechanics on facial balance.

#### PROGRAM OUTLINE:

- Measuring vertical growth
- Genetic and environmental influences
- The importance of adequate nasal respiration
- Vertical maxillary excess
- Iarabak ratio for lower anterior face height
- Autorotation of the mandible

- - Anterior open bite correction
  - Straightwire mechanics for the high angle malocclusion
  - Second molar replacement therapy
  - Magnetic intrusion appliances
  - Retention in anterior open bite cases
  - Tongue thrust and tongue posture
  - Surgical maxillary impaction
  - Reverse Curve of Spee wires
  - Anterior box elastics
  - Controlling molar eruption
  - Active molar intrusion techniques
  - Surgical correction of the long face syndrome

Diagnosis and treatment of a "Gummy Smile"



#### **PROGRAM HIGHLIGHTS:**

Orthodontic correction maybe destroyed by failure to recognize periodontal susceptibility.

Doctors will understand the tissue response to certain types of tooth movement.

The ability to manage adult orthodontic patients that are susceptible to periodontal disease

Slow extraction of hopeless teeth to create new bone for implants.

- Guiding the eruption of the permanent cuspid
- Beveling gingivectomies
- Mobility of teeth/occlusal trauma
- Frenectomies
- The use of spiral CT radiology to locate impacted teeth
- Gingival margin discrepancies between teeth
- Treatment of subgingival fractures using forced extrusion mechanics
- Improving the Crown to root ratio
- Correction of gingival/osseous defects
- The advantages and disadvantages of opening or closing missing lateral incisor spaces

- Efficient molar uprighting
- Etiology of canine impaction
- Auto transplantation of teeth
- Orthodontic treatment of the Periodontally compromised patient
- Periodontal differences in the exposure of palatal vs. labial impactions
- Use of a cantilever (whip spring) to bring a palatally impacted canine into the arch
- Treatment of impacted central incisors
- Bodily movement of teeth into an infrabony defect
- Fiberotomy (CSF)
- Ankylosis and external root resorption



### COURSE 9: BIOMECHANICS IN CLINICAL ORTHODONTICS



#### **PROGRAM HIGHLIGHTS:**

The application of biomechanical principles in the design of appliances and the development of popular orthodontic techniques.

An understanding of basic force concepts such as magnitude, duration, direction, force constancy, point of force application, load deflection rate, moments, and couples generated.

Review of biomechanically designed appliances to promote predictable tooth movement, optimize the biologic tissue response, and minimize unwanted side effects

- Treating patients with a deep dental overbite and over closed facial proportions
- Treating patients with a deep dental overbite and increased facial proportions
- Treating patients with an open bite and over closed facial proportions
- Treating patients with an open bite and increased facial proportions
- Biomechanical basis of extractions and space closure





- Biomechanical aspects of Class II correction
- Biomechanical aspects of a modified protraction headgear
- A bioefficient skeletal anchorage system
- Review of material alternatives in the selection of archwires
- Optimal case finishing strategies
- Interrelationship of orthodontics and restorative dentistry
- Biologic mechanisms in orthodontic tooth movement
- Frictional forces and the use of self-ligating brackets
- Use of magnets in orthodontics
- Intrusion mechanics in the non growing individual
- MEAW technique

# **COURSE 10: SURGICAL ORTHODONTICS**

#### **PROGRAM HIGHLIGHTS:**

Doctors will understand the basics of computerized videoimaging technology and how it is used for diagnosis, treatment planning, "testing" of various treatment options, and communication with patients.

Understanding the deviations from normal facial proportions and dental relationships that are severe enough to compromise jaw functions and or facial appearance.

Learning how to decompensate the dental arches in preparation for orthognathic surgery.

#### **PROGRAM OUTLINE:**

- The aetiological factors in the development of a dento-facial deformity
- Evaluations of facial soft tissues
- Principles of surgical management
- Maxillary surgeries
- Mandibular surgery
- Maxillo-facial distraction osteogenesis
- Combining surgical procedures in the maxilla and mandible
- Indications for surgery
- Psychosocial aspects of dentofacial deformity
- Chin modification
- Rhinoplasty

- Lip procedures
- Mid face and paranasal implants
- Post surgical stability
- Prevention and management of surgical complications
- Dento facial asymmetry
- Review of diagnostic templates
- Treatment of mandibular deficiency and mandibular excess
- Lateral corticotomy



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### COURSE 11: ESTHETIC AND LINGUAL APPLIANCES



#### **PROGRAM HIGHLIGHTS:**

Use of lingual appliances including impression taking, laboratory setup, and indirect bonding.

Overview of clear brackets including monocrystalline, and polycrystalline ceramics, polycarbonate and polyoxymethylene materials.

- Advantages and disadvantages of lingual appliances
- Biomechanics in levelling and aligning with the lingual technique

- Laboratory procedures and bonding techniques with lingual appliances
- Use of a lingual bracket lig, vs. TARG setup, CLASS setup, Hiro technique or CAD technology
- Automatic fabrication of lingual arch wires using robotic technology
- Customized lingual braces using technology from OraMetrix
- Bonding to porcelain
- Elastodontics and tooth positioners
- Bracket fractures and friction in ceramic brackets
- Wear of enamel and bond strength concerns with ceramic brackets
- Debonding of ceramic brackets
- Staining of esthetic brackets and conventional ligatures
- Self ligating esthetic brackets

### COURSE 12: MANAGEMENT OF TMD BRUXISM AND OSA

#### **PROGRAM HIGHLIGHTS:**

Doctors will learn how to achieve a balanced face, healthy stable jaw joints, and a good occlusion for their patients.

Doctors will have a better understanding of their role in the management of orofacial pain.

Design retention appliances and adjunctive procedures to maximize the stability of orthodontic treatment.

#### PROGRAM OUTLINE:

- Classification of Oro-facial pain
- Differential diagnosis of intra-capsular disorders
- Myo-facial pain
- Radiography of the Temporomandibular joint with emphasis on computer tomography and magnetic resonance imaging
- Review of healthy temporomandibular joint anatomy
- Trauma to the TMI
- Hyper mobility and dislocation
- Inflammatory diseases of the TMI
- Occlusal splint construction including flat plane, pivotal and forward repositioning splints
- Splint adjustments
- Nutrition and it's role in TMI therapy
- Occlusal equilibration

- Prosthodontic case finishing post TMD
- Orthodontic case finishing post TMD
- Use of bio-instrumentation and principles of neuromuscular dentistry
- Maintaining diastema closure using Ribbond
- Literature review of studies associated with orthodontic stability
- Reorganisation of the periodontal tissues
- Occlusal changes related to growth
- "Active" retention philosophies in growing patients
- Realignment of irregular incisors using spring retainers
- The use of tooth positioners
- Definition and Causes of Snoring and Obstructive

Sleep Apnoea

- Treatment Modalities for OSA and Snoring
- Monitoring Devices/Polysomography
- CPAP
- Epworth Sleepniness Scale
- Mandibular repositioning appilances for treatment of

snoring

Overview of normal sleep pattern



