General Orthodontic Residency
Course Outline

6 Sessions - 2 days each

Session 1: 2 Days: 7th, 8th May 2016

**Diagnostics and Treatment Planning**

I. Initiating the Ideal Learning Experience
II. Introduction to Modern Orthopedics/Orthodontics
III. State-of-the-Art Advanced Orthopedic/Orthodontic Treatment Objectives
IV. What is normal: Applying the principles of facial growth modern orthodontics
V. What is excellence: Achieving Balanced Faces, Lasting Smiles, Facial Beauty, Orthodontic Excellence, and Long Term Stability
VI. The Long Term Benefits of Balanced Function, Guided Growth, the Absence of a Malocclusion
VII. Malocclusions: What are the causative factors and how they are permanently corrected?
   a. Classifying Malocclusions
   b. Understanding the meaning of each malocclusion
   c. Using the GOR Website and GOR Interactive Program to assess each malocclusion
   d. Easily identifying each malocclusion

VIII. Orthodontic Records based on the requirements for the International Board of Orthodontics (IBO)
   a. The P.O.E (Preliminary Orthodontic Evaluation)
   b. Introducing Caseworx: The IBO method of entering your cases in a standardized format for excellence.
   c. A Thorough Clinical Examination
      i. What to look for
      ii. The 10 usually missed signs of a complex case
      iii. Finding these signs early will shorten your treatment time significantly
      iv. The Significance of the “Big 3”
      v. The Mew Indicator and other markers of facial disharmony
      vi. Utilizing the IBO/GOR Comprehensive Clinical Examination Program
   d. Study Models: How to take excellent models and the proper interpretation of them
      i. Plaster Models vs. 3D Digital Models
      ii. How to determine the ideal arch development using study models
      iii. GOR Model Analysis Applications
      iv. Why Schwarz-Korkhaus Model Analysis is obsolete
      v. The Golden Proportion rule in ideal arch development
   e. Initial Photographic Records and Subsequent Photographic Records
      i. Choosing your camera
      ii. Framing your photographs
      iii. Checking your focus and light
      iv. Photographs are “rock solid” treatment records
v. Diagnostic photographic records
   1. Frontal of face and shoulders in repose (hair behind the ear and no glasses)
   2. Frontal of face and shoulders in repose during swallow (hair behind the ear and no glasses)
   3. Frontal of face and shoulders smiling (hair behind the ear and no glasses)
   4. Profile facing left of head and shoulder in repose (hair behind the ear and no glasses)
   5. Frontal of full body in repose (hair behind the ear and no glasses)
   6. Profile facing left of full body in repose (hair behind the ear and no glasses)
   7. MX arch (direct or in mirror)
   8. MN arch (direct or in mirror)
   9. Right teeth in full intercuspation (direct or in mirror)
  10. Left teeth in full intercuspation (direct or in mirror)
  11. Frontal of teeth in full intercuspation
  12. Frontal of teeth slightly open
  13. Frontal of teeth during swallow

vi. Case progression photographs – Required during treatment
   1. Same as initial photographs
   2. Reading the progression of treatment photographs
   3. Benefits of in-treatment photographs

vii. Finished case photographs – Required
   1. Methodology and importance of excellent images.

viii. Yearly retention photographs – Required
   1. Methodology and importance of excellent images.

f. Radiography
   i. Orthopantomograph - Required
   ii. Cephalometrics - Required
   iii. TMJ Images - Required
   iv. 3D CBCT – The best radiographic records available
      1. Orthopantomograph representation
      2. Cephalometrics representation
      3. TMJ representation
      4. Nasal-Pharyngeal airway representation
         a. Analysis
      5. Oral-Pharyngeal airway representation
         a. Analysis
      6. Cervical-Vertebral representation
         a. Lateral Analysis
            i. Reading the Cervical Maturation Analysis to determine the growth age of the patient - Required
            b. Frontal Analysis
            c. Posterior Analysis

IX. Diagnostic Principles
   a. The International Board of Orthodontics (Required) Analysis
      i. Critical Factors
      ii. Confirmation Factors
   b. Additional Growth and Treatment Driven Analyses
      i. Critical Factors
      ii. Confirmation Factors
c. 3D CBCT Analysis
   i. Critical Factors
   ii. Confirmation Factors
   iii. Relevant Factors
   iv. Secondary Clues

d. Soft Tissue Analysis
   i. Muscle, tissue and air spaces
   ii. Predicting change

e. TMJ Analysis
   i. Condylar morphology
   ii. Position of meniscus
   iii. Predicting change

f. Cranio-mandibular Functional Analysis
   i. Norms vs. Ideal
   ii. Determining necessary changes
   iii. Predicting the amount of change

g. Reading and interpreting the diagnostic results: Hands ON
   i. The “Big” Picture
   ii. Prioritizing the diagnostic values
   iii. Interpreting the diagnostic information
   iv. Using the “General Orthodontic Residency Diagnostic Flow Sheet”
   v. Transition to “Treatment Planning Mode”

X. Basic Treatment Planning: Hands On
   a. What is the “Chief Complaint” and how to address it
   b. What are the patient’s/parent’s expectations
   c. How much growth potential is available during treatment
   d. What goals need to be accomplished
   e. What sequence should be followed
   f. Using the “General Orthodontic Residency Treatment Flow Sheet”
   g. Using the GOR Interactive Treatment Planning Module

XI. Advanced Treatment Planning: Hands On
   a. “Cherry Pick” your first cases
   b. What is the compliance factor of the patient
   c. What is achievable in the time frame available
   d. Determining the serious underlying problems
   e. What other additional healthcare professionals will be required to assist with treatment

XII. Consultation information and techniques which will inspire the patient to say “Yes”
   a. Types of consultations
      i. Detailed
      ii. Moderate
      iii. Simple
   b. Examples of effective consultations
   c. Determining the best “fit” for your practice
   d. Patient communication before and after the consultation
   e. Keeping records of the consultation
   f. Answering questions and explaining treatment
   g. Modifying the patient’s/parent’s expectations before treatment
   h. What information should you have available for the consultation
   i. Informed consent
      i. GOR informed consent authorization
      ii. Other examples
Facial Growth and the Biology of Malocclusions

I. The Biology of Growth and Dynamic Changes of the Cranium/Maxilla/Mandibular Complex
   a. Growth, Airway, Genetic Tendencies, Staying Alive
      i. Simplifying the Biology of Growth
      ii. Influence of genetics
      iii. Dynamics of growth
         1. Permanent vs. reversible
         2. Why growth appliances work
         3. Long term stability
   b. Factors effecting the Biology of Growth
      i. The Influence of Soft Tissue on Growth
      ii. Mouth Breathing vs. Nasal Breathing
      iii. The importance of a competent lip seal
      iv. Tongue position and habits
      v. The “Big 3”
   c. Controlling the growth direction
      i. Influencing genetic tendencies for facial bone remodeling
      ii. Displacement and Remodeling
      iii. How bone remolds
      iv. Effectively remodeling bone
      v. Wolf's Law
      vi. The “Big 3”
   d. The importance of establishing accurate indicators of aberrant growth
      i. Interpreting the indicators or markers to determine the best course of treatment
      ii. Sequencing the treatment timing to achieve the required biological changes
   e. Using the GOR Website and GOR Interactive Program to determine a detailed treatment plan

II. Introduction to “Osseo-Restoration™” Growth Guidance Appliances
   a. Definition of Growth Guidance Appliances
   b. History of Growth Guidance Appliances
   c. Modern concepts in appliance design

III. MX Removable “Osseo-Restoration™” Anterior Growth Guidance Appliance
   a. Detailed description and design
   b. Required adjustments
   c. Clinical decision making during treatment
   d. Instructions to patient and parents
   e. Expectations of patient, parent and clinician
   f. Initiating the “BIG 3”
   g. Step-by-step sequencing and monthly adjustments for each patient
   h. Case finishing and retention
   i. Preventing relapse
   j. Patient cases shown in detail before, during, and after treatment
      i. Clinical Application
      ii. Excellent results
      iii. Compromised results (poor compliance)
IV. MX Fixed “Osseo-Restoration™” Growth Guidance Appliances
   a. Detailed descriptions and designs
   b. Determining which design to use
   c. Required adjustments
   d. Clinical decision making during treatment
   e. Instructions to patient and parents
   f. Initiating the “BIG 3”
   g. Step-by-step sequencing and monthly adjustments for each patient
   h. Case finishing and retention
   i. Preventing relapse
   j. Expectations of patient, parent and clinician
   k. Patient cases shown in detail before, during, and after treatment
      i. Clinical Application
      ii. Excellent results
      iii. Compromised results (poor compliance)

V. MX Tongue Thrust Appliance
   a. Detailed descriptions and designs
   b. Determining which design to use
   c. Required adjustments
   d. Clinical decision making during treatment
   e. Instructions to patient and parents
   f. Initiating the “BIG 3”
   g. Step-by-step sequencing and monthly adjustments for each patient
   h. Case finishing and retention
   i. Preventing relapse
   j. Expectations of patient, parent and clinician
   k. Patient cases shown in detail before, during, and after treatment
      i. Clinical Application
      ii. Excellent results
      iii. Compromised results (poor compliance)

VI. MN Removable Sweep “Osseo-Restoration™” Appliance
   a. Detailed description and design
   b. Required adjustments
   c. Clinical decision making during treatment
   d. Instructions to patient and parents
   e. Expectations of patient, parent and clinician
   f. Initiating the “BIG 3”
   g. Step-by-step sequencing and monthly adjustments for each patient
   h. Case finishing and retention
   i. Preventing relapse
   j. Patient cases shown in detail before, during, and after treatment
      i. Clinical Application
      ii. Excellent results
      iii. Compromised results (poor compliance)

VII. MN Williams “Osseo-Restoration™” Appliance
    a. Detailed description and design
    b. Required adjustments
    c. Clinical decision making during treatment
    d. Instructions to patient and parents
    e. Expectations of patient, parent and clinician
    f. Initiating the “BIG 3”
g. Step-by-step sequencing and monthly adjustments for each patient
h. Case finishing and retention
i. Preventing relapse
j. Patient cases shown in detail before, during, and after treatment
   i. Clinical Application
   ii. Excellent results
   iii. Compromised results (poor compliance)

VIII. MX/MN FRLAs (Holding appliances to prevent relapse)
   a. Detailed description and design
   b. Required adjustments
   c. Clinical decision making during treatment
   d. Instructions to patient and parents
   e. Expectations of patient, parent and clinician
   f. Patient cases shown in detail before, during, and after treatment
      i. Clinical Application
      ii. Excellent results
      iii. Compromised results (poor compliance)

IX. Other Useful Appliance Applications
   a. Detailed description and design
   b. Required adjustments
   c. Clinical decision making during treatment
   d. Instructions to patient and parents
   e. Expectations of patient, parent and clinician
   f. Review of cases
      i. Clinical Application
      ii. Excellent results
      iii. Compromised results (poor compliance)

X. Review: How the MN remodels and changes shape through remodeling
   a. Soft tissue signals vs appliance signals
   b. The “Big 3” – Competent Lips, Nasal Breathing and No Tongue Habits
   c. How to Establish the “Big 3”

XI. Hands On Appliance Adjustment Session
XII. Utilizing Allied Healthcare Professionals
XIII. How the MN establishes a Class I relation with the MX
   a. Why does the mandible come forward to a Class I position?
   b. Ways to encourage the positional change
   c. When does the mandible advance to a Class I position?
   d. Obstacles during treatment

XIV. Habits that effect any outcome
XV. Case Reviews of the effectiveness of early use of “Osseo-Restoration™” Growth Guidance Appliances
XVI. Case Reviews of the effectiveness of “Osseo-Restoration™” Growth Guidance Appliances after growth is complete
XVII. The use of FRLAs to maintain progress before fixed orthodontic therapy
Session 3:  2 Days:  24th, 25th September 2016

Fixed Orthodontics and the ControlledArch® System

I. Diagnostic and Treatment Planning review
II. Overview of basic fixed orthodontics, biology, and the “ControlledArch®” Technique
III. The “ControlledArch®” Technique
   a. The Model for Exceptional Orthodontics in Clinical Practice
   b. Not since the introduction of the Straightwire® Appliance by Dr. Larry Andrews, in 1969 has an advancement in orthodontics made such a significant and positive impact.
   c. Why ControlledArch?
      i. Eliminates the common problems associated with traditional orthodontic techniques.
         1. Case Finishing Difficulties
         2. Incomplete coupling of the anterior teeth
         3. Lingual “dumping” of the mandibular molars
         4. Protrusion of the upper or lower lip
         5. MX or MN labial crown torque
         6. Complete and Predictable Control during treatment
         7. Lack of long-term stability after treatment
      ii. The ControlledArch® System gives the orthodontic practitioner Total Control of patient treatment and Total Control of the movement of the teeth
         1. The movements of the teeth and bone are "Controlled"
         2. A problem free course of treatment
         3. Ease of Transition from Functional Orthopedics to Fixed Appliances
         4. Extended Arch Development Capabilities
         5. Application of Multiple Mechanical Actions
         6. Application of Case Finishing
         7. Continuation of Case Improvement after Case Finishing
      iii. The ControlledArch® System Guarantees Predictable, Stable Results that can be Repeated on Patient after Patient
         1. An integral part of using the ControlledArch® System is the ability to project the effects of treatment to create long-term esthetics for the patient
         2. Comparison of the ControlledArch® System to other techniques
   d. Fixed Orthodontics basics
      i. Bracketing
         1. Types of brackets and bands
         2. Bracket Prescriptions
         3. Metal vs. ceramic vs. hybrid
      ii. Bonding Brackets
         1. Position
         2. Formulas for positioning
         3. Bonding Technique
         4. Types of bonding agents
         5. Hands-on exercise
         6. Accuracy of direct vs. indirect bonding
         7. Hands On Session
iii. Fitting bands
   1. Position and the importance of placing them correctly every time
   2. Technique for consistence placement every time
   3. Types of band cements and choosing the correct one
   4. Hands-on exercise

iv. Archwires
   1. History
   2. Purpose
   3. Types
      A. Metallurgy
      B. Cosmetic
   4. Technique for inserting an archwire
   5. Hands-on exercise

e. Treating with the ControlledArch® System
   i. Components
      1. FRLA
      2. Broad Arch Bio-efficient wires: Unique wires for the ControlledArch® System
      3. Molar lock-stops: Why they are required and where they are placed
      4. Occlusal Pads: Why they are required and where they are placed
      5. Alastics and power chains
      6. Treatment time for the ControlledArch® System

   ii. Treatment sequence: Step-by-step
      1. Initial wires/arch development
      2. Midline correction
      3. Protraction or retraction
      4. Closing spaces
      5. Transition to finishing wires
      6. Establishing solid Class I occlusion
      7. No wire bending required

   iii. Utilizing the ControlledArch® System to establish
      1. Proper TMJ function
      2. Class I occlusion
      3. Correct anterior coupling
      4. Long Term Stability
      5. Balanced Faces
      6. Beautiful Lasting Smiles

iv. Cases, Cases, Cases

v. Case finishing
   1. Fine tuning results
   2. Optimizing patient satisfaction
   3. Finishing secrets
   4. Consent for debanding
Session 4: 2 Days: 12th, 13th November 2016

Treating Class II Patients

I. Diagnostic and Treatment Planning review
II. Overview of basic fixed orthodontics, biology, and the “ControlledArch” Technique
III. Review of all of the 12 configurations of the Class II malocclusion and the Class II headform
IV. MN up-righting and how it increases the MN length and establishes a Class I occlusion
   a. Physiology review
   b. High angle cases
      i. Causative factors
      ii. Methods to guide growth
   c. Low angle cases
      i. Causative factors
      ii. Methods to guide growth
   d. Deep dental bite cases
      i. Causative factors
      ii. Methods to guide growth
   e. Open dental bite cases
      i. Causative factors
      ii. Methods to guide growth
V. The “Big 3”
   a. Importance
   b. Methods to achieve the “Big 3”
      i. Clinical methods
      ii. Ancillary methods
VI. Class II, div. 1 malocclusion: How to treat all configurations (4)
   a. Indications
   b. Causative factors
   c. Early treatment
      i. Diagnosis
      ii. Methods of correction
         1. Medical
         2. Appliance
         3. The “Big 3”
         4. Combination treatments
      iii. Retention
      iv. Case reviews
   d. Late treatment
      i. Diagnosis
      ii. Methods of correction
         1. Medical
         2. Appliance/Controlled Arch®
         3. The “Big 3”
         4. Combination treatments
      iii. Retention
      iv. Case reviews
VII. Class II, div. 2 malocclusion: How to treat all configurations (4)
   a. Indications
   b. Causative factors
c. Early treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews
d. Late treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews

VIII. Class II, div. 3 malocclusion: How to treat all configurations (4)
a. Indications
b. Causative factors
c. Early treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews
d. Late treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance/Controlled Arch
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews

IX. Recognizing success
   a. Asking for referrals
   b. Handling non-compliant patients

X. Review of Surgical Cases
   a. Evaluation for surgery
   b. Pros vs. cons of facial surgery

XI. Long Term Maintenance
   a. Re-enforcing the “Big 3”
   b. Recognizing subtle changes
      i. Quickly reversing subtle long term changes
   c. Asking for referrals
Treating Class III Patients

I. Diagnostic and Treatment Planning review

II. Overview of basic fixed orthodontics, biology, and the “ControlledArch®” Technique

III. Review of all of the 12 configurations of the Class III malocclusion and the Class III headform

IV. MN up-righting and how it increases the MN length and establishes a Class I occlusion
   a. Physiology review
   b. High angle cases
      i. Causative factors
      ii. Methods to guide growth
   c. Low angle cases
      i. Causative factors
      ii. Methods to guide growth
   d. Deep dental bite cases
      i. Causative factors
      ii. Methods to guide growth
   e. Open dental bite cases
      i. Causative factors
      ii. Methods to guide growth

V. The “Big 3”
   a. Importance
   b. Methods to achieve the “Big 3”
      i. Clinical methods
      ii. Ancillary methods

VI. Class III, div. 1 malocclusion: How to treat all configurations (4)
   a. Indications
   b. Causative factors
   c. Early treatment
      i. Diagnosis
      ii. Methods of correction
         1. Medical
         2. Appliance
         3. The “Big 3”
         4. Combination treatments
      iii. Retention
      iv. Case reviews
   d. Late treatment
      i. Diagnosis
      ii. Methods of correction
         1. Medical
         2. Appliance/Controlled Arch®
         3. The “Big 3”
         4. Combination treatments
      iii. Retention
      iv. Case reviews

VII. Class III, div. 2 malocclusion: How to treat all configurations (4)
   a. Indications
   b. Causative factors
c. Early treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews
d. Late treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance/Controlled Arch®
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews

VIII. Class III, div. 3 malocclusion: How to treat all configurations (4)
a. Indications
b. Causative factors
c. Early treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews
d. Late treatment
   i. Diagnosis
   ii. Methods of correction
      1. Medical
      2. Appliance/Controlled Arch®
      3. The “Big 3”
      4. Combination treatments
   iii. Retention
   iv. Case reviews

IX. Putting it all together: Detailed review of what you have learned
   a. Connecting the “dots” in Dentofacial orthopaedics and orthodontics
   b. Asking for referrals
   c. Handling non-compliant patients

X. Review of Surgical Cases
   a. Evaluation for surgery
   b. Pros vs. cons of facial surgery

XI. Long Term Maintenance
   a. Re-enforcing the “Big 3”
   b. Recognizing subtle changes
      i. Quickly reversing subtle long term changes
   c. Asking for referrals
Session 6: 2 Days: 6th, 7th May 2017

Case Finishing, Introduction to TMD, Retention, Esthetics and Effectively Promoting your Practice

I. Case Finishing
   a. The common problems encountered trying to finish a case
   b. The not-so-common problems associated with case finishing
   c. The seven steps to successful case finishing
      i. Easy to follow steps to guide the clinician to case completion
      ii. Group discussion on clinical decision making
   d. Why clinicians using “Growth Guidance Appliances and the ControlledArch® System seldom have case finishing concerns
   e. Specific mechanics and techniques to finish difficult cases
      i. An interactive session allowing each practitioner to present case finishing problems.
         1. Dr. Galella will demonstrate the methods of gaining control of each case
      ii. Little known mechanics and techniques for difficult case will be presented
         1. Dr. Galella will present each attendee with a special addition to the GOR manual which includes these techniques.
   f. Finishing non-compliant cases
   g. How to maintain finished cases

II. Introduction to TMD treatment
    a. Essentials of TMJ
    b. Clinical vs non-clinical TMD
    c. Evaluation and diagnosis
       i. A thorough evaluation is a must
       ii. Differential diagnosis
    d. Choosing which cases to treat
    e. Splint Therapy and curing TMD

III. Retention
    a. How long should retention occur
    b. Types of retention
       i. Fixed
       ii. Removable
       iii. Combination
    c. Unusual types of retention
       i. Habit appliances
       ii. Sleep appliances
       iii. TMJ appliances
    d. Common retention applications
       i. MN bonded fixed custom retainer
       ii. MX Essix type removable retainer
       iii. MX Clear Bow retainer
          1. Clear Bow Alone
          2. Clear Bow plus Super Springs
          3. Wrap around Clear Bow retainer
       iv. Miscellaneous retainer options
e. Specific need retention appliances
   i. Class II, div 2 MX retainer
   ii. Severe Class III MX retainer
   iii. OSA retainer
   iv. Open bite retainer
      1. MX
      2. MN
   v. Missing teeth and retention
f. Retention appliance design
   i. Detailed description and design
   ii. Required adjustments
   iii. Clinical decision making during post-op treatment
   iv. Instructions to patient and parents
   v. Expectations of patient, parent and clinician
   vi. Review of cases
g. Retention checklist
   i. An interactive checklist for determining which retainer to use

IV. Esthetics
   a. Introduction to Rapid Smiles
   b. Rapid Smiles vs. Invisalign
   c. The connection between restorative and esthetic orthodontics

V. Promoting Orthopedics and Orthodontics in your practice
   a. Overview of professional marketing
      i. Target audience
      ii. The language of marketing
      iii. Projection of your image
      iv. Branding
   b. Methods of professional marketing
      i. Internal marketing
         1. Definition
         2. Benefits
         3. Investment
         4. Branding
         5. Finding the best person or business to control your market
         6. Investment or budget
         7. Secrets successful professionals use without a large budget
      ii. External marketing
         1. Definition
         2. Benefits
         3. Investment
         4. Branding
         5. Finding the best person or business to control your market
         6. Secrets successful professionals use without a large budget
      iii. Branding
         1. Types
         2. Importance
         3. Tying in with your current logo and practice philosophy
         4. Coordinating your success with your staff
c. Using Social Media to your advantage
   i. Creating the right platform
   ii. Finding the right media controller
   iii. Following your social media progress
   iv. A detailed outline of creating a social media platform
   v. Avoid these pitfalls
   vi. It is not just what you say, it is what you do!!!
      1. Can you walk the walk?

d. Developing your orthodontic practice
   i. Begin by “cherry-picking” your cases
   ii. Develop your experience base slowly
      1. Do not take on difficult cases until you are ready
      2. Be patient with your learning curve
   iii. Patiently train your staff
      1. In technique
      2. The correct words to use
      3. The proper way to explain your treatment
      4. Staff education means that you will be successful

e. The future of your practice
   i. An in-depth discussion of what is new, what changes are in the future and how you can be prepared for these changes.