

**PROPOSED TIME TABLE FOR ADVANCED MASTER TRAINING IN
INTERCEPTIVE AND MYOFUNCTIONAL THERAPY
(BIOFUNCTIONAL THERAPY)**

FACULTIES FOR THE SESSION

1) Pedodontist

a) Prof. Dr Joby Peter, MDS, FDSRCS(Eng), PGDCFS

Prof and Head, Dept of Paediatric and Preventive Dentistry

Annoor Dental College and Hospital.

Head of Academics, Online Dentistry, Kerala.

b) Dr Krishnakumar R MDS, PhD, FDSRCS(Eng)

Prof, Dept of paediatric and preventive dentistry

Annoor Dental College and Hospital.

2) Orthodontist - Dr Binu T Abraham, D-Ortho (USA) Director and Chief Consultant at Kerala Dental Clinic Kerala

3) ENT: Dr Sanu P Moideen MBBS, MS (ENT), DNB (ENT), FHNOS Fellowship in Head and Neck Oncosurgery (RCC, Trivandrum) Fellowship in Obstructive Sleep Apnea Surgery (IASSA), Speciality training in Pediatric ENT (CMC Vellore & Texas Children's Hospital, USA)

4) Pulmonologist - Dr Shine Shukoor Rasheed, MD, FCCP, Kinder multispecialty hospital Kerala

5) Audiologist and Speech language pathologist – Ashitha Paul K, Prayatna Centre For Child Development, Kerala.

6) Two international experts subject to their availability.

This Advanced master training program is done in Association with Faculties from Annoor Dental College and Hospital, Muvattupuzha, Kerala, Faculties from online dentistry, Aluva Kerala, Kinder multispecialty hospital Kerala, MCH Hospital Muvattupuzha, MUCM Manipal Malaysia.

All candidates will given 15 to 20 cases of various conditions and full planning of treatment, lab prescription, delivery of appliance, follow ups, and assisting for various cases in the clinical posting.

Please Note:

- Each Module is spaced with a gap of 3 months
- Exact Details of Dates will be announced through flyers

Note: Each module is of 3 days and every quarter one offline module will be there. Online module is of 36 hours split into 18 days with 2-hour session per day. Online module includes live zoom session, recorded video with quiz to finish and submission of assignment, case discussion, Library dissertation work, journal club presentation.

PROPOSED IN CAMPUS TIMETABLE

All class starts at 8.30 AM IST to 4 PM IST with two 30 minutes tea snack break and 45 minutes lunch break.

MODULE 1: September 2024 : 19 20 21

Day 1:

- ☐ Inauguration
- ☐ Induction
- ☐ Overall view of the course
- ☐ Need and purpose of Interceptive Orthodontics (Session 1)
- ☐ Need and Purpose of Interceptive Orthodontics (session 2)
- ☐ Clinical Relevance of Growth and Development
- ☐ Basic Concept/Theories of Growth and Development.
- ☐ Cephalocoudal growth/Scammons Growth Curve
- ☐ Growth Hormone and its significance
- ☐ Development of dentition and planning your case
- ☐ Case sheet overview and introduction to diagnostic set up planning in BIMT.

CLINICS:

- ☐ Basic Photography lecture/Hands on
- ☐ DSLR vs Mobile dental photography
- ☐ Armamentarium for dental photography
- ☐ Cropping /Editing/Storing/Retrieving
- ☐ Live picture taking and editing
- ☐ All candidates to submit full photo records

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Day 2:

- ☐ Photo analysis: orthodontic diagnostic set up planning with photo analysis
- ☐ Ceph Tracing and land marks
- ☐ Ceph Composite analysis: 33 point cephalometric analysis (Downs/STEINER/Wits Appraisal/JARABACK/MACNAMARA/JEFFERSON/SASSUONI PLUS).
- ☐ Clinical visit
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

- ☐ New cases allotment (5 Patients will be given for complete record taking Photo/imp/base pouring/ceph/opg)

Day 3

- ☐ Alginate Impression/Rubber base/intraoral scanners
- ☐ Hands on impression on typhodonts /intraoral scanning demo.
- ☐ Cast pouring/ Base forming.
- ☐ Submission
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

- ☐ New cases allotment (5 Patients will be given for complete record taking Photo/imp/base pouring/ceph/opg)

SUBMIT: One patient Photo/cast/Ceph/OPG.

MODULE 2: December 2024 : 26 27 28

Day 1

- ☐ Overview of module 1
- ☐ Submission of assignments
- ☐ Case presentation of approved cases: 5
- ☐ MODEL Analysis: total space analysis /permanent dentition analysis/schwarz value with Korkhuas K value
- ☐ OPG analysis; Early sign of crowding and canine impaction prediction.
- ☐ Advanced ceph analysis for complex cases: sassouni plus bottomline/Jeffersons/Vertical arc/Y axis
- ☐ All candidates to trace the last module ceph/ and their own case ceph
- ☐ Clinical posting
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

- ☐ New cases allotment (5 Patients will be given for complete record taking Photo/imp/base pouring/ceph/opg).

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Day 2

- ☐ 2x4 Orthodontics in Pediatric Practice
- ☐ This will cover the benefits of early orthodontic intervention
- ☐ Case selection for early age orthodontics
- ☐ Bio-mechanics Orthodontic tooth movement: biology of tooth movements
- ☐ Orthodontic armamentarium
- ☐ Evolution of SW orthodontics and sectional bracketing system
- ☐ Wire sequencing for 2X4 and its modifications
- ☐ Use of Elastics in early age when how and why
 - Space closure elastics
 - Cross elastics
 - Class 2 elastics
 - Class 3 elastics

Use of Springs in early age orthodontics: open versus closed niti springs
Auxiliary methods used in early age orthodontics for minor tooth movements.
Common applications in mixed dentition.

Hands-on Experience

- Straight wire bracket placement and ideal location
- Complete wire sequencing for 2x4 appliances
 - Dual arch wires
 - Canine traction methods
 - Cimpable hooks/auxiliary buttons etc used in specific tooth movements
- Candidates will work with color modules, wires, and orthodontic instruments such as Matthews pliers, cutters (straight wire and light wire cutters), and more. They will practice bracket placement, wire manipulation, and removal, ensuring thorough understanding and proficiency in placing 2x4 appliances in pediatric cases.

By the end of the session, attendees will be confident in placing 2x4 appliances in pediatric cases, enhancing their clinical skills and patient care.

Day 3:

- ☐ Interceptive management of Non-Skeletal Malocclusion
- ☐ Space management
- ☐ Space Regainers : various methods used with appliances
- ☐ Incisor crowding and its management
- ☐ Frenum and its management: labial and lingual frenum
- ☐ Eruption sequence /non-Eruption and its management
- ☐ Clinical posting
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

- ☐ New cases allotment (5 Patients will be given for complete record taking Photo/imp/base pouring/ceph/opg).

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MODULE 3: April 2025 : 03 04 05

Day 1:

- ☐ Habit and management: a comprehensive multidisciplinary methods to break an Habit.
- ☐ Case history taking
 - Modified case sheet filling for Mouth breathing
 - Modified case sheet filling for thumb sucking habit
 - Modified case sheet filling for tongue thrusting habit

ENT : Air way analysis and role of ENT. Visit to MCUM

- ☐ How to refer ENT? : modified ENT referral from
- ☐ How to manage a patient referred from ENT to you?
- ☐ Flexible nasal endoscopy live demonstration and adenoid grading
- ☐ Non surgical management of enlarged adenoids
- ☐ Surgical management of enlarged adenoids: live demonstration of
- ☐ Clinical posting: 5 case follow ups and discussion
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

- ☐ New cases allotment (5 Patients will be given for complete record taking)

Day 2:

Sleep study at sleep clinic kinder hospital

- ☐ **The Normal Upper Airway**
- ☐ Upper Airway Structure During Development
- ☐ Functional Aspects and Upper Airway Control
- ☐ During Wakefulness and Sleep
- ☐ Lymphadenoid Tissues in the Upper Airway
- ☐ The Nasal Airway
- ☐ **Sleep During Development**
- ☐ Neural Mechanisms of Sleep and Circadian Rhythms
- ☐ EEG and Sleep During Development
- ☐ Pathophysiology of Pediatric Obstructive Sleep Apnea: Putting It All Together
- ☐ **Diagnostic Assessment of Sleep and Breathing in Children**
- ☐ Clinical Evaluation of the Pediatric Patient
- ☐ Overnight Sleep Study and MSLT
- ☐ Upper Airway Imaging in Children with Obstructive Sleep Apnea Syndrome
- ☐ Pediatric Sleep-Disordered Breathing: Criteria and Spectrum of Disease

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☐ **SDB in Children**

- ☐ Apnea of Prematurity
- ☐ Epidemiologic Aspects of Pediatric OSA Around the World
- ☐ Obesity and Sleep
- ☐ Central Hypoventilation Syndromes
- ☐ Health-Care Utilization and Pediatric Obstructive Sleep Apnea
- ☐ Gastroesophageal Reflux and Sleep-Disordered Breathing

☐ **Consequences of SDB in Children**

- ☐ Behavioral Morbidity in Pediatric Sleep-Disordered Breathing
- ☐ Neurocognitive Function and Learning in Children with Sleep-Disordered Breathing
- ☐ Brain Regulatory Mechanisms Underlying Breathing: Insights for Sleep Pathology
- ☐ Cardiovascular Implications
- ☐ Metabolic Consequences of Sleep Disorders
- ☐ Enuresis and Obstructive Sleep Apnea in Children

☐ **Treatment of SDB**

- ☐ Adenotonsillectomy
- ☐ Corticosteroids and Leukotriene Modifiers in Pediatric SDB
- ☐ CPAP Treatment in Children
- ☐ Mandibular Advancement Devices
- ☐ Diaphragmatic Pacing in Infants and Children with Congenital Central Hypoventilation Syndrome.

Day 3

- ☐ Management of
 - Mouth breathing
 - Tongue thrusting
 - Thumb sucking
 - Lip biting and other habits
- ☐ Clinical Postings
- ☐ Present cases
- ☐ Habit case analysis
- ☐ Expansion in paediatric dentistry
- ☐ SME : removable and fixed (quad helix)
 - Removable jack screw and its modifications
 - Modified quad helix: Wilson 3D quad helix
 - Modified palatal expander
- ☐ RME: role of rapid maxillary expansion: HYRAX AND FAN RME
- ☐ Clinical posting: 5 case follow ups and discussion
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)
- ☐ New cases allotment (5 Patients will be given for complete record taking)

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MODULE 4: July 2025 : 24 25 26

Day 1

- ☐ Twin block (Mandibular Retrognathism) lecture and case discussion with patent demo and record taking.
- ☐ Functional regulator and its clinical application, activation and muscle exercises with clinical management
- ☐ Orthoptopic and Myobrace system overview
- ☐ Utility arch and its application in paediatric dentistry: hands on demo and case discussion: case for utility arch.
- ☐ Clinical posting: 5 case follow ups and discussion
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

Day 2

- ☐ Lecture: Orthopedic and its clinical application
- ☐ Face mask therapy
- ☐ Maxillary intrusion splint and head gear therapy
- ☐ Clinical posting: 5 case follow ups and discussion
- ☐ Cases related to 2x4/ Orthopaedic/Twin block
- ☐ Clinical posting: 5 case follow ups and discussion
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)

Day 3

- ☐ Clinical posting: 5 case follow ups and discussion
- ☐ Patient demo of various stages of interceptive and myofunctional therapy(ongoing)
- ☐ New cases allotment (5 Patients will be given for complete record taking)
- ☐ **LAB VISIT:** All appliance demonstration and fabrications
- ☐ Lab visit: maxdent: clear aligner and its fabrications
- ☐ All interceptive and myofunctional appliances and its fabrication
- ☐ Sleep apnea management appliances
- ☐ Orthopedic appliances
- ☐ Library dissertation submission
- College valedictory function and certificate distribution.

Graduation/defend viva/case presentation/MCQ test

Proposed date: January 3rd week 2026 (dates are subjected to university approval which will be done 6 months prior to the class).

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Day 1

Highlights

Changing concepts in pediatric dental practice

Unknown reality: pediatric disturbed sleep disorder

Mouth breathing an early warning sign of a hidden problem

Snoring and its ill effects in growth and development

Sleep: physiology, types and sleep cycle of a child: the circadian rhythm

Clinical assessment of disturbed sleep disorder: case sheet fill

Role of dentist in management of pediatric sleep disorder

Airway first pediatric dental practice

Various modalities of disturbed sleep management strategies in pediatric dentistry

Growth identification for appliance therapy: cvmi index marking

Day 2

Role of Invisalign for early age orthodontics

Demonstration

- Expansion: SME and RME appliances demo and activation protocol
- Mandibular advancement appliances: FR2/Myobrace/twin block/rick O nator
- Adjustments of various appliances
- Various myofunctional exercises to correct breathing problems

Fellowship Exam

Submission of Mini Project/Case and JC

Result announcements

Graduation ceremony

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Online module timetable with course content covered

Applied Anatomy & genetics: related to interceptive and myofunctional therapy

Applied Physiology: applied aspect to the course

Applied Pathology: applied aspect to the course

Nutrition and Dietetics: applied aspect to the course

Growth & Development: Prenatal and postnatal development of cranium, face, jaws, teeth and supporting structures. Chronology of dental development and development of occlusion. Dimensional changes in dental arches. Cephalometric evaluation of growth.

Preventive Pedodontics: Concepts, chair side preventive measures for dental diseases, Preventive Management: Pit and Fissures Sealants, Oral Hygiene measures, Correlation of brushing with dental caries and periodontal diseases

(Review class before on campus course)

Online assessment and progress of the candidates and preparation for the upcoming in campus module.

Interceptive Orthodontics:

- a. Concepts of occlusion and esthetics: Structure and function of all anatomic components of occlusion, mechanics of articulations, recording of masticatory function, diagnosis of Occlusal dysfunction, relationship of TMJ anatomy and pathology and related neuromuscular physiology.
- b. A comprehensive review of the local and systemic factors in the causation of malocclusion.
- c. Recognition and management of normal and abnormal developmental occlusions in primary, mixed and permanent dentitions in children (Occlusal Guidance).
- d. Biology of tooth movement: A comprehensive review of the principles of teeth movement
Review of contemporary literature. Histopathology of bone and Periodontal ligament, Molecular and ultra cellular consideration in tooth movement.
- e. Myofunctional appliances: Basic principles, contemporary appliances: Design & Fabrication
- f. Removable appliances: Basic principles, contemporary' appliances: Design & Fabrication
- g. Case selection & diagnosis in interceptive Orthodontics (Cephalometric, Image processing, Tracing, Radiation hygiene, Video imaging and advance Cephalometric techniques).
- h. Space Management: Etiology, Diagnosis of space problems, analysis, Biomechanics, Planned extraction in interception orthodontics.

Oral Habits in Children:

- Definition, Etiology & Classification
- Clinical features of digit sucking, tongue thrusting, mouth breathing & various other secondary habits.

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Online assessment and progress of the candidates and preparation for the upcoming in campus module.

Online assessment and progress of the candidates and preparation for the upcoming in campus module.

- Management of oral habits in children.

Case History Recording, Outline of principles of examination, diagnosis & treatment planning.
Principles of Biostatistics & Research Methodology & Understanding of Computers and Photography

Role of speech therapist and dentist

- Introduction
- Articulation
- Speech
- Place Of Articulation
- Manner Of Articulation
- Tongue & Teeth
- Speech retraining
- References

ENT and dentistry the missing link

- Anatomy of upper and lower airway
- Clinical significance of adenoid and tonsils
- Patho-physiology with indication for adeno-tonsillectomy
- OSA in children
- Patho physiology of OSA
- Diagnosis and management of pediatric OSA
- Video demonstration of adeno-tonsillectomy

Pediatric disturbed sleep disorder and role of pulmonologist

- The Nature and Structure of Sleep
- Sleep Neurobiology
- A Dental Perspective on the Classification of Sleep Disorders
- Role of Dentists in Sleep Medicine
- Overview of Guidelines/Protocols for SDB
- Sleep-Related Breathing Disorders
- Pathophysiology of OSA
- Mouth Breathing, Dentofacial Morphology, and SDB
- Diagnosis and Management of Pediatric OSA

Review class before on campus course at MUCM

Online assessment and progress of the candidates and preparation for the upcoming in campus module at Malaysia.

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Recommended Books And Journals

1. WILLIAM R. PROFFIT, Contemporary Orthodontics
2. GRABER & VANARSDALL, Orthodontics - Current Principles & Techniques
3. MOYERS, Text Book of Orthodontics
4. GRABER, Orthodontics Principles and practice.
5. GRABER, PETROVIC, & RAKOSI Dentofacial Orthopedics with Functional Appliances
6. ATHENASIOU E ATHENASIOU, Orthodontic cephalometry
7. JACOBSON, Radiographic Cephalometry
8. RAKOSI, An Atlas And Manual of Cephalometric Radiography
9. ENLOW, Handbook of Facial Growth
10. EPKER & FISH, Dentofacial Deformities Vol. 1
11. PROFFIT & WHITE, Surgical Orthodontic Treatment
12. NANDA, Biomechanics in Clinical Orthodontics
13. NANDA & BURSTONE, Retention and Stability in Orthodontics
14. OKESON, Management of T.M. Disorders And Occlusion
15. LOU NORTON & DAVIDOWITCH, Biology of tooth movement
16. OKESON, TMJ Disorders.
17. L. JOHNSTON, New Vistas in Orthodontics
18. LEE GRABER, Orthodontics - State of the Art-The Essence of Science
19. M. RAKOSI & GRABER, A Color Atlas of Dental Medicine
20. BURSTONE, Modern Edgewise Mechanics and Segmented Arch Technique
21. W J CLARK, The Twin Block Functional Therapy
22. McNAMARA & BRUDON, Mixed Dentition
23. R D ROBLEE, Interdisciplinary Dentofacial Therapy
24. NANDA, The Developmental Basics of Occlusion and Malocclusion
25. TIMMS, Rapid Maxillary Expansion
26. WILLIAMS & COOKS, Fixed Orthodontic Appliances
27. RICKETTS, Bioprogressive Therapy
28. VAN DER LINDEN, Quintessence Series
29. MICHIGAN CENTER, Craniofacial Growth Series for human growth and Development
30. SALZMAN, Practice of Orthodontics Vol II and I
31. ROHIT SACHDEVA, Orthodontics for the next millennium
32. SCHWIDLING, The Jasper Jumper
33. ROBERT RICKETTS, Provocations and preceptions in Craniofacial Orthopedics
34. Pediatric Dentistry (Infancy through Adolescence) - Pinkham.
35. Occlusal guidance in Pediatric Dentistry - Stephen H. Wei.
36. Clinical Use of Fluorides - Stephen H. Wei.
37. Pediatric Medical Emergencies - P. S. Whatt.
38. Understanding of Dental Caries - Niki Foruk.
39. An Atlas of Glass Ionomer cements - G J. Mount.
40. Clinical Pedodontics - Finn.
41. Textbook of Pediatric Dentistry - Braham Morris.
42. Dentistry for the Child and Adolescence - Mc. Donald.
43. Pediatric Dentistry - Damle S. G
44. Behaviour Management – Wright
45. Occlusal guidance in Pediatric Dentistry - Nakata.

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JOURNALS:

The journals are best source of information for professionals to keep abreast with the recent developments and trends in their respective specialties. Please find list of Journals mentioned below:

1. Journal of Indian Dental Association
2. British Dental Journal
3. Journal of American Dental Association
4. Journal of Dentistry
5. Dental Clinics of North America
6. Quintessence International
7. Australian Dental Journal
8. American Journal of Orthodontics and Dentofacial Orthopedics
9. Journal of Orthodontics (formerly British Journal of Orthodontics)
10. Angle Orthodontics
11. Journal of Clinical Orthodontics
12. Journal of Indian Orthodontic Society
13. Seminars in Orthodontics
14. Journal of Orthodontics and Dentofacial Orthopedics
15. European Journal of Orthodontics
16. Australian Journal of Orthodontics
17. International Journal of Adult Orthodontics and Orthognathic surgery
18. The Functional Orthodontist.
19. ASDC Journal of Dentistry for children.
20. International Journal of Pediatric Dentistry
21. Pediatric Dentistry
22. Journal of Indian Society of Pedodontics & Preventive Dentistry

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