



Τμήμα Οδοντιατρικής ΑΠΘ

Πρόγραμμα Μεταπτυχιακών Σπουδών στην Παιδοδοντιατρική (Postgraduate Program in Paediatric Dentistry)

**Μ2.3 Οδηγός Σπουδών του ΠΜΣ του
τρέχοντος ακαδημαϊκού έτους (με το
σύνολο των πιστωτικών μονάδων ECTS
του ΠΜΣ και τα προσδοκώμενα
μαθησιακά αποτελέσματα του ΠΜΣ) - ΕΝ**

Core curriculum

The core curriculum of the Postgraduate Program in Pediatric Dentistry with the corresponding credit units is shown in the following Table:

Core curriculum			
CODE	COURSE	ECTS	H/W.
GS1	Pediatrics 2nd semester	2	1
GS2	Cell biology, Genetics, Embryology of the head 1 st semester	2	1
GS3	Growth and development of craniofacial skeleton. Development of the dentition (normal and abnormal 2nd semester	2	1
GS4	Research methodology –Epidemiology. Biostatistics 1 st semester	2	1
GS5	Dental Materials 1 st semester	2	1
Required Minimum ECTS Total		10	

Post Graduate students are required to attend all courses in Core curriculum. It is mandatory to complete at least 10 ECTS from Core curriculum.

Specialty Curriculum

The Specialty Curriculum courses of the Postgraduate Program in Pediatric Dentistry with their corresponding ECTS units are displayed in the following Table:

ΕΙΔΙΚΑ ΜΑΘΗΜΑΤΑ Specialty Curriculum			
CODE	COURSE	ECTS	H/W.
1st Semester			
S0101	Anxiety - fear - phobia- pain.	2	1
S0102	Behaviour guidance by non-pharmacological techniques. Local anaesthesia. The emergency case	2	2
S0103	Prevention - treatment of dental / periodontal disease. Paediatric dentist in the society	2	1
S0104	Dental caries in primary and young permanent teeth	2	1
S0105	Restorative Dentistry in children. I. Materials and protocols	2	1
R0106	Literature review / Research protocols	2	1
C0107	Lab and clinical training	12	
	Core curriculum	6	3
	Total	30	
2nd Semester			

S0201	Diagnosis - Treatment plan - / CVR - Behaviour management by pharmacological techniques.	2	2
S0202	Preventive and interceptive orthodontics in the primary and mixed dentition	2	1
S0203	Dental trauma	2	1
S0204	Restorative Dentistry in children. II. Dental anomalies	2	1
R0205	Literature review / Research protocols – Designing projects for a Master thesis.	2	1
S0206	Case report presentations – Treatment planning	2	1
C0207	Clinic	14	
	Core curriculum	4	2
	Total	30	
	3rd Semester		
S0301	Endodontics in paediatric dentistry	2	1
S0302	Soft tissue pathology and minor surgical techniques. Medically compromised young patients	2	1
C0303	Undergraduate clinic supervision training. Case report presentations.	2	2
R0304	Literature review. Preparation for a systematic review. Master thesis preparation.	2	1
C0305	Clinic	20	
C0306	Hospital Dentistry. Dental rehabilitation in the Operating Room	2	1
	Total	30	
	4th Semester		
S0401	Dental patients with disabilities. Craniofacial anomalies - Syndromes	2	1
C0402	Undergraduate clinic supervision training. Case report presentations.	2	2
S0403	Multidisciplinary co-operation for the pediatric dentist.	2	1
R0404	Literature review. Master thesis preparation.	2	1
C0405	Clinic	20	
C0406	Visit to Paediatrics and Anaesthesiology clinics. Hospital Dentistry. Dental rehabilitation in the Operating Room	2	
	Total	30	
	5th Semester		
C0501	Undergraduate clinic supervision. Case report presentations.	2	2
S0502	Literature review.	2	1
R0503	Presenting at a major Dental Congress. Master thesis preparation	4	
C0504	Clinic	20	
C0505	Hospital Dentistry. Dental rehabilitation in the Operating Room	2	
	Total	30	
	6th Semester		
C0601	Training in PG clinic supervision. Undergraduate teaching. Case report presentations.	2	2
S0602	Literature review.	2	1
R0603	Master thesis/ Submitting the manuscript for publication in peer review journal.	20	
C0604	Clinic	4	

C0605	Hospital Dentistry. Dental rehabilitation in the Operating Room	2	
	Total	30	
	ECTS Total	180	

The expected learning outcomes of the Postgraduate Programma in Paediatric Dentistry from the respective courses are the following:

Anxiety - fear - phobia- pain (CODE: S0101, ECTS: 2)

Children and adolescents constitute a group of individuals who exhibit significant differences in various parameters: age, abilities, maturity, personality, temperament, emotions, experiences, oral health, family background, cultural background, etc. All of these parameters related to the child and their environment, as well as those related to the dental environment, influence the child's behavior regarding the acceptance of dental treatment. These lessons make an effort to highlight these parameters so that the dentist can understand the underlying causes of unwanted behavior in the child.

Behavior guidance by non-pharmacological techniques. Local anaesthesia. The emergency case (CODE: S0102 , ECTS: 2)

The goal is the knowledge and study of various psychological behavior modification techniques used in pediatric dentistry to achieve cooperation from children in dental treatment. It should enable the dentist to recognize the patient's behavior and select the appropriate techniques for each case based on scientific evidence.

Prevention - treatment of dental / periodontal disease. Paediatric dentistry in the society (CODE: S0103, ECTS: 2)

The student critically reads contemporary articles from the international (English-language) literature and engages in group discussions about the findings of a publication related to the subject of the course, in the form of a seminar, to enhance their understanding of the topic.

Dental caries in primary and young permanent teeth. (CODE: S0104, ECTS: 2)

At the end of the course, the student should have acquired knowledge in the following areas: About caries (etiology, histopathology, diagnosis, treatment planning, prevention) and non-carious dental lesions, malformations, and discolorations. About the use, handling, and nomenclature of instruments used (handpieces-rotaries). About the process of completing the patient's history, determining caries risk and caries index, and evaluating carious lesions according to ICDAS II. About techniques for the removal of carious lesions.

Restorative dentistry in children. I. Materials and protocols (CODE: S0105, ECTS: 2)

Upon completing the course, students will: Have acquired knowledge related to the selection and use of materials used in dental clinical practice. Be familiar with assessing the effectiveness and issues related to the application of materials. Be familiar with methods of testing materials and potential problems that arise from the interaction of materials within the oral environment.

Literature review/Research protocols (CODE: R0106, ECTS: 2)

The postgraduate student should be trained in the process of studying and evaluating contemporary literature. They should be able to recognize the quality and validity of published studies in scientific journals.

Lab and clinical training (CODE: C0107, ECTS: 12)

The student should be aware of the care and restoration techniques for oral diseases in the primary and mixed dentition of children. They should become familiar with dental care for children, adolescents, and individuals with disabilities. They should have practiced various therapeutic solutions and understood the specific needs of patients treated in Pediatric Dentistry. They should also be sensitive to the timely and effective management of the oral health issues of these patients.

Diagnosis - treatment plan /CVR - Behaviour management by pharmacological techniques (CODE: S0201, ECTS: 2)

The objective is to acquire knowledge and study various pharmacological techniques for behavior management used in pediatric dentistry to achieve cooperation from children in dental treatment. The student should be able to recognize the patient's behavior and select the appropriate techniques for each case based on scientific evidence.

Preventive and interceptive orthodontics in the primary and mixed dentition (CODE: S0202, ECTS: 2)

Understanding the basic principles and concepts related to the prevention and diagnosis of orthodontic issues in the primary and mixed dentition. Familiarity with the techniques used for assessing and preventing orthodontic problems in children and adolescents. The ability to diagnose orthodontic problems and evaluate their severity. Understanding the available methods for addressing and treating orthodontic issues in children and adolescents. Enhancement of communication and patient management skills, including communication with parents or guardians of children. Implementation of preventive measures for addressing and preventing orthodontic problems in children and adolescents. These expected learning outcomes aim to prepare postgraduate students in Paediatric Dentistry to provide high-quality preventive and interceptive orthodontic care to children, ensuring their oral health and overall well-being. The specific outcomes may vary depending on the program and institution offering the course.

Dental Trauma (CODE: S0203, ECTS: 2)

Injuries to the lower part of the face occur in approximately one-third of the total population, and most of these injuries require dental care. Trauma to the teeth and the surrounding oral tissues is much more common in children than in adults and can have medical, functional, aesthetic, or even psychological consequences for young patients. The term dental trauma, or simply dental injury, refers to any injury to the teeth themselves, the supporting bone, the soft tissues of the mouth that cover or come into contact with the teeth, or a combination of these. These are conditions that can cause varying degrees of pain, inflammation, and discomfort and are often associated with injuries to other parts of the face and body. Dental trauma in children typically causes significant anxiety for both the children themselves and their parents, and its treatment presents a challenge for the dentist. To achieve the best prognosis, excellent knowledge and expertise are required.

Restorative dentistry in children II. Dental anomalies (CODE: S0204, ECTS: 2)

Upon completion of the course, students will:

Have acquired knowledge related to the selection and use of materials used in dental clinical practice. Be familiar with the evaluation of the effectiveness and application challenges of these materials. Be knowledgeable about methods of testing and procedures for materials and potential issues arising from the functioning of materials within the oral environment.

Topics covered include: Atraumatic Restorative Technique (ART) in primary and permanent teeth. Description. When and how it is used. Materials used. Clinical studies, systematic reviews, meta-analyses, documentation. Minimal Intervention Dentistry (MID) I. Important diagnostic elements. Forms of MID. Correlation with carious lesions. Prevention. Restoration of lesions of light MID. Material of choice. Selection of bonding system. Clinical studies – documentation. Minimal Intervention Dentistry (MID) II. Prevention - restoration of moderate and severe forms of MID. Material selection. Comparative studies, systematic reviews, meta-analyses. Clinical studies - documentation. Materials used for the treatment of developmental enamel and dentin disorders (DDED). Bonding system selection. Management of anterior and posterior teeth with DDED. Management of mild, moderate, and severe DDED in primary and permanent teeth. Erosion. Materials used for the treatment of erosion in primary and permanent teeth. Factors affecting the bonding capacity of materials. Comparative studies, systematic reviews regarding bonding capacity. Release mechanism of fluoride from restorative materials: Glass ionomers, resin-modified glass ionomers, composite resins, resin-based materials for fissure sealing and pit restorations. Re-uptake of fluoride from restorative materials. Effect of released fluoride on plaque and secondary caries. Prevention of adjacent unaffected enamel caries. Clinical significance of fluoride release. Biocompatibility and cytotoxicity of modern dental materials. Methods of assessment. Adverse reactions for the patient, dental personnel, and the environment. Inorganic elements – monomers contained in resin-based materials and glass ionomers. Types. Basic properties. Which types of monomers are contained in each material? Laboratory studies. Advantages and disadvantages in clinical practice. Mechanical behavior of materials used in restorative dentistry (amalgam, GIC, composite, RMGIC, ART, compomers, bioactive materials). Mechanical properties of materials used in primary and permanent teeth. Clinical and laboratory studies. Research interest in improving these materials. Bonding systems in primary and permanent teeth. Types. Advantages and disadvantages. Comparative studies. Laboratory studies – Clinical studies. Silver Diamine Fluoride (SDF). Chemical composition. Procedure. Indications - Contraindications. Advantages - Disadvantages. Possible adverse reactions. Acceptance by parents. Impact on oral hygiene. Subsequent restoration - with what materials - removal of dental tissue? Laser. Types of lasers in clinical dental practice. Type of anesthesia - analgesia. Type of laser and method of use for the removal of carious dental tissue. Recommended restorative materials. Bonding system. Effectiveness. Comparative studies compared to classical techniques. Clinical studies - laboratory studies.

**Literature reviews / Research protocols - Designing projects for a Master thesis
(CODE: R0205, ECTS: 2)**

The students acquire the ability to critically read contemporary articles from international (English-language) literature and to comment on possible improvements

in the design and presentation of publication results. This has a direct impact on their future dissertation writing.

Case report presentatios - Treatment planning (CODE: S0206, ECTS: 2)

Presentation and in-depth discussion of cases from the postgraduate clinic.

Clinic (CODE: C0207, ECTS: 14)

After successful completion of the course, the student is knowledgeable about: how to examine a pediatric dental patient, gather all the necessary diagnostic material, make a diagnosis, develop a comprehensive and cost-effective treatment plan, present it to the patient, schedule and perform all necessary dental treatments, refer treatments that require specialized care to the corresponding postgraduate clinics, and inform the patient about the follow-up examination program to be followed.

Endodontics in paediatric dentistry (CODE: S0301, ECTS: 2)

Upon completing the courses, the student is expected to:

- Understand the basic principles of endodontic treatment for primary and young permanent teeth.
- Be familiar with the morphology of the pulp cavity of primary teeth.
- Know the tools and materials used.
- Be proficient in taking and interpreting intraoral radiographs.
- Have practiced the techniques of root canal preparation and obturation.
- Be acquainted with the mechanisms of pulpal and periapical inflammation in primary teeth.
- Have practiced the diagnosis and differential diagnosis of pulp and periapical diseases.
- Understand the mechanisms of microbial action in pulp and periapical tissues.
- Cultivate the skills for differentiating pulp and periapical diseases.
- Be sensitized to when and why endodontic treatment is performed or not performed on primary and young permanent teeth.

Soft tissue pathology and minor surgical techniques. Medically compromised young patients. (CODE: S0302, ECTS: 2)

Deepen their knowledge in the subject of oral pathology, minor oral surgery, and chronic diseases for pediatric dentistry patient groups. The invited speakers, specialists in their respective subjects, will share their knowledge and clinical experience with them on the topics of the course.

Undergraduate clinic supervision training. Case report preparations (CODE: C0303, ECTS: 2)

Education and experience in teaching is a unit aimed at preparing postgraduate students for the transmission of knowledge they possess to their peers. All postgraduate students are involved in teaching as well as in the clinical training of undergraduates. Postgraduate students are trained during the 2nd and 3rd years of their studies as clinical assistant instructors in undergraduate clinics, assisting the supervisor. Postgraduate students in the 5th and 6th semesters present clinical cases they have encountered (in the form of case presentations) followed by a discussion on the treatment plan and its execution based on scientific evidence. Postgraduate students from all semesters attend and participate in the discussion.

Literature review. Preparation for a systematic review. Master thesis preparation. (CODE: R0304, ECTS: 2)

"The students acquire the ability to critically read contemporary articles from the international (English-language) literature and to comment on possible improvements for the design and presentation of publication results. This has a direct impact on their future dissertation writing."

Clinic (CODE: C0305, ECTS: 20)

The student should be familiar with the techniques of care and restoration of oral diseases in infants and mixed dentition of children. They should become acquainted with dental care for children, adolescents, and individuals with disabilities. They should have practiced various therapeutic solutions and understood the specific needs of patients belonging to the groups that Pediatric Dentistry addresses. They should also be sensitized to the timely and effective treatment of oral problems in these patients.

Hospital dentistry. dental rehabilitation in the Operating Room. (CODE: C0306, ECTS: 2)

The postgraduate students are to be trained in providing dental treatment to patient groups in Pediatric Dentistry under general anesthesia. The training includes preparation (collaboration with an anesthesiologist, pediatrician, and other medical specialties), execution of the treatment plan in the operating room, and subsequent patient monitoring.

Dental patients with disabilities. Craniofacial anomalies - Syndromes. (CODE: S0401, ECTS: 2)

The goal is to acquire knowledge about the specific characteristics of the oral cavity, face, and body of patients with syndromes and craniofacial abnormalities. Additionally, to understand the specific methods for implementing the treatment plan for this group of patients.

Undergraduate clinic supervising training. Case report preparataions. (CODE: C0402, ECTS: 2)

Education and experience in teaching is a unit aimed at preparing postgraduate students to transmit their knowledge to their peers. All postgraduate students are involved in teaching as well as in the clinical training of undergraduates. Postgraduate students are trained during the 2nd and 3rd years of their studies as clinical assistant instructors in undergraduate clinics, assisting the supervisor. Postgraduate students in the 5th and 6th semesters present clinical cases they have encountered (in the form of case presentations) followed by a discussion on the treatment plan and its execution based on scientific evidence. Postgraduate students from all semesters attend and participate in the discussion.

Multidisciplinary co-operation for the pediatric dentist (CODE: S0403, ECTS: 2)

They should learn the necessity and how to collaborate with other specialties related to the patient groups in pediatric dentistry. They should be aware of the treatment philosophy for addressing the specific problems of pediatric dentistry patient groups by other specialists.

Literature review. Master thesis preparation. (CODE: R0404, ECTS: 2)

The purpose of the postgraduate course is for students to: Stay updated on the most contemporary literature related to the field of pediatric dentistry. Critically evaluate the literature. Learn how to write a scientific article.

Clinic (CODE: C0405, ECTS: 20)

After successfully completing the course, the student knows how to: examine a pediatric dental patient, gather all the necessary diagnostic materials, make a diagnosis, formulate a comprehensive and cost-effective treatment plan, present it to the patient, schedule and perform all required dental treatments, refer treatments that require specialized care to the corresponding postgraduate clinics, and inform the patient about the follow-up examination schedule they should follow.

Visit to Paediatrics and Anaesthesiology clinics. Hospital Dentistry. Dental rehabilitation in the Operating Room. (CODE: C0406, ECTS: 2)

The postgraduate students are to be trained in providing dental treatment to patient groups in Pediatric Dentistry under general anesthesia. The training includes preparation (collaboration with an anesthesiologist, pediatrician, and other medical specialties), execution of the treatment plan in the operating room, and subsequent patient monitoring.

Undergraduate clinic supervising training. Case report preparataions. (CODE: C0501, ECTS: 2)

Education and experience in teaching is a unit aimed at preparing postgraduate students to transmit their knowledge to their colleagues. All postgraduate students engage in teaching as well as in the clinical training of undergraduates. Postgraduate students are trained during the 2nd and 3rd years of their studies as clinical assistant instructors in undergraduate clinics, assisting the supervisor. Postgraduate students in the 5th and 6th semesters present clinical cases they have encountered (in the form of case presentations), followed by a discussion regarding the treatment plan and its execution based on scientific evidence. Students from all semesters attend and participate in the discussion.

Literature review (CODE: S0502, ECTS: 2)

The purpose of the postgraduate course is for students to: Stay updated on the most contemporary literature related to the field of pediatric dentistry. Critically evaluate the literature. Learn how to write a scientific article.

Presenting at a major Dental Congress. Master thesis preparation. (CODE: R0503, ECTS: 4)

As part of the obligations of the postgraduate student, participation and presentation of some work, preferably the thesis or part of it, at an international pediatric dentistry conference is required. The student, in collaboration with their respective supervisor, prepares the presentation in the form of an oral or poster presentation.

Clinic (CODE: C0504, ECTS: 20)

The student should be familiar with the care and restoration techniques for oral diseases in the primary and mixed dentition of children. They should become acquainted with dental care for children, adolescents, and individuals with disabilities. They should have practiced various therapeutic solutions and understood the specific needs of patients belonging to the groups that Pediatric Dentistry addresses. They should also be sensitized to the timely and effective treatment of oral problems in these patients.

Hospital Dentistry. Dental rehabilitation in the Operating Room. (CODE: C0505, ECTS: 2)

Upon successful completion of the course, students will be able to: Understand the specifics of patients under chronic medication. Be familiar with the most important drug interactions used in Dentistry with other drugs. Evaluate laboratory tests for chronically ill patients. Have an understanding of hospital structures and the role of the dentist within them. Possess knowledge and skills for conducting dentistry using portable equipment. Additionally, after successfully completing the course, the student will know how to: Examine a pediatric dental patient. Collect all the necessary diagnostic material. Make a diagnosis. Develop a comprehensive and costed treatment plan. Present it to the patient. Schedule and perform all required dental treatments. Refer treatments requiring specialized care to the appropriate postgraduate clinics. Inform the patient about the follow-up examination program.

Training in the PG clinic supervision. Undergraduate teaching. Case report presentations. (CODE: C0601, ECTS: 2)

Education and experience in teaching is a unit aimed at preparing postgraduate students to transmit the knowledge they possess to other colleagues. All postgraduate students are involved in teaching as well as in the clinical training of undergraduates. Postgraduate students are trained during the 2nd and 3rd years of their studies as clinical assistant trainers in undergraduate clinics, assisting their supervisors. Postgraduate students in the 5th and 6th semesters present clinical cases that they manage (in the form of case presentations), followed by discussions regarding the treatment plan and its execution based on scientific evidence. Postgraduate students from all semesters attend and participate in these discussions.

Literature review (CODE: S0602, ECTS: 2)

The purpose of the postgraduate course is for students to: Stay updated on the most current literature related to the field of pediatric dentistry. Critically evaluate the literature. Learn how to write a scientific article.

Master thesis/ Submitting the manuscript for publication in peer review journal. (CODE: R0603, ECTS: 20)

Upon successful completion of the course, students will be able to: Understand the specificities of patients under chronic pharmacological treatment, Know the significant drug interactions used in Dentistry with other medications, Evaluate laboratory tests of chronically ill patients, Have an understanding of hospital structures and the role of Dentists within them, Possess knowledge and skills for performing Dentistry with portable equipment. Additionally, after successfully

completing the course, the student will be able to: examine a pediatric dental patient, gather all necessary diagnostic material, make a diagnosis, develop a comprehensive and cost-estimated treatment plan, present it to the patient, schedule and perform all necessary dental treatments, refer treatments requiring specialized care to the respective postgraduate clinics, and inform the patient about the follow-up examination program they should follow.

Clinic (CODE: C0604, ECTS: 4)

The student should be familiar with the care and restoration techniques for oral diseases in the primary and mixed dentition of children. They should become acquainted with dental care for children, adolescents, and individuals with disabilities. They should have practiced various therapeutic solutions and understood the specific needs of patients belonging to the groups that Pediatric Dentistry addresses. They should also be sensitized to the timely and effective treatment of oral problems in these patients.

Hospital Dentistry. Dental Rehabilitation in the Operating Room (CODE: C0605, ECTS: 2)

Upon successful completion of the course, students will be able to: Understand the specificities of patients under chronic medication. Be aware of the significant drug interactions used in Dentistry with other drugs. Evaluate laboratory tests for chronically ill patients. Have an understanding of hospital structures and the role of the dentist within them. Possess knowledge and skills for performing dentistry with portable equipment. Additionally, the student will know how to examine a pediatric dental patient, gather all necessary diagnostic materials, make a diagnosis, formulate a comprehensive and cost-effective treatment plan, present it to the patient, schedule and perform all necessary dental treatments, refer treatments requiring specialized care to the respective postgraduate clinics, and inform the patient about the follow-up examination program.

Pediatrics (CODE: GS1, ECTS: 2)

Upon completion of the course, students will know: Principles of classifying syndromes based on etiology, treatment response, and outcome. Contemporary patient and family management in relation to development and growth. Epidemiology, pathogenesis, and management of pediatric diseases. Development and Adolescence: Normalcy and common disorders related to Pediatric Dentistry.

Cell biology, Genetics, Embryology of the head (CODE: GS2, ECTS: 2)

The aim of this particular course is to comprehend the fundamental principles of cellular biology, genetics, and embryology of the head. Upon completing the course, students will be able to easily understand the normal mechanism of craniofacial development, as well as the possible craniofacial dysplasias and dental abnormalities they may encounter in their daily clinical practice.

Growth and development of craniofacial skeleton, Development of the Dentition (normal & abnormal (CODE: GS3, ECTS: 2)

Understanding the fundamental principles and processes related to the development of the skull, face, and dentition. Comprehending the role of genetics, embryology, and cellular biology in the development of the skull, face, and dentition. The ability to diagnose and assess problems and abnormalities related to the skull, face, and dentition. Proficiency in formulating effective treatment plans and interventions for correcting abnormalities in the craniofacial and dentition areas. Familiarity with evaluating the development of dentition in children and adolescents and applying this knowledge in orthodontic practice. Strengthening communication and patient management skills, including communication with the parents or guardians of children. Proficiency in utilizing modern technologies and methods for assessing and monitoring development. These outcomes aim to equip students with comprehensive knowledge and skills related to craniofacial growth, dentition formation, and orthodontic practices in pediatric and adolescent patients.

Research methodology-Epidemiology-Biostatistics (CODE: GS4, ECTS: 2)

While statistical software is not an end in itself for understanding statistical concepts, it is, nevertheless, the primary means for conducting statistical analyses and serves as a fundamental tool for the direct application of theoretical knowledge to examples and problems. Thus, throughout the semester, students will be trained in handling statistical software so that they can manage data from statistical studies and perform statistical analysis on dental research data (IBM SPSS Statistics and the R language).

Dental Materials (CODE: GS5, ECTS: 2)

Upon completion of the course, students will: Have acquired knowledge regarding the selection and use of materials used in dental clinical practice. Be familiar with evaluating the effectiveness and application challenges of materials. Be proficient in methods of testing materials and procedures for addressing potential issues arising from the interaction of materials within the oral environment.