

# CERTIFICATE IN ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS

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## Program Description:

### Director:

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## Program Overview

The advanced education residency program in orthodontics and dentofacial orthopedics has existed since 1946. UMKC Orthodontics Alumni are located in many states and some foreign countries.

This is a full-time, 30-month residency program that begins July 1st. It is designed to prepare the resident for community practice of orthodontics and dentofacial orthopedics. Curriculum emphasis is placed on the edgewise technique and on interceptive and functional treatment. Management of craniofacial anomalies is taught didactically and clinically in association with the craniofacial team at Children's Mercy Hospital. Objective inquiry and statistical validation are emphasized in all aspects of this program. Completion of an original research project and paper is required. The computerized clinic facility is a working-research model that simulates the private practice environment. Courses, clinics, and dedicated research time are organized to facilitate the completion of an MS or PhD degree in Oral and Craniofacial Sciences. A separate application is required for the MS or PhD program after acceptance into the orthodontics residency.

## Application and Acceptance

An applicant for this program must be a citizen of the United States or permanent resident in the United States. Applicants must also submit evidence of graduation with a Doctoral of Dental Surgery (DDS) or Doctor of Dental Medicine (DMD) from a school of dentistry accredited by the Commission on Dental Accreditation or the Canadian Dental Accrediting Commission. A minimum dental school 3.0 GPA and completion of the GRE is required for all applicants.

Applications are considered from the following groups:

- Fourth-year dental students from American Dental Association (ADA) or Canadian Dental Association (CDA) Accredited schools who are in the top 50 percent of their graduating class.
- Graduates of ADA or CDA accredited dental schools who ranked in the top 50 percent of their graduating classes and have satisfactorily completed a general practice residency or other dental specialty program prior to application and successfully passed a U.S. regional or equivalent Canadian clinical licensure exam.
- Graduates of a School of Dentistry who ranked in the top 50 percent of their class and have been in general practices and successfully passed a U.S. regional or equivalent Canadian clinical licensure exam.

Selection of candidates is a twofold process. First, candidates are stratified on the basis of academic and professional performance: GRE scores, class standing, other advanced education program education, practice experience, leadership roles in organized dental groups, dental school teaching, research experience and recommendations are considered. Preferences will be given to individuals who limit their applications to programs participating in MATCH.

Secondly, an appropriate number of applicants meeting screening criteria are invited for interviews. All interviews are conducted at the School of Dentistry on the same day and all invited candidates must attend this session to be eligible for final selection into the class. If offered a position in a class through the MATCH, this offer, like all offers from the University, is contingent upon a successful background screening. In order to begin the background screening, individuals who MATCH must complete a required employment application and background check that is returned to Human Resources within two business days. Three residents are accepted into this program annually. Accepted residents must successfully complete a U.S. regional or equivalent Canadian clinical licensure exam prior to or no later than the end of the first year of residency. Applicants, who have been out of dental school for a year or more, must successfully pass a clinical licensure exam before they start in UMKC's Orthodontic residency.

Application for admission **MUST** be through the ADEA PASS program and completed on or before September 1 of the year prior to planned enrollment. Detailed application information is available at Important Information for Applicants (<https://dentistry.umkc.edu/academics/orthodontics-dentofacial-orthopedics/>).

## Stipend

Orthodontic residents will receive a competitive annual stipend paid on a monthly basis.

## Tuition and Fees

Estimated tuition and fee costs may be found on the cashier's website (<https://www.umkc.edu/cashiers/tuition-fees/index.html>) (<https://www.umkc.edu/cashiers/tuition-fees/>). There are additional costs for books, laptop computer and required meeting attendance associated with this program.

## Instruments

Residents are required to lease their dental instruments through the School of Dentistry. All instruments are provided and are maintained by the Central Sterilization program of the school.

## Financial Assistance

Up-to-date information on additional financial assistance may be found in the school financial aids charts at <https://finaid.umkc.edu/>.

## Student Learning Outcomes

Students graduating from this program will:

- Demonstrate diagnostic skills
- Demonstrate the ability to synthesize treatment plans, and implement appropriate therapeutic modalities
- Demonstrate the ability to analyze treatment outcomes

Residents enrolled in the Orthodontics and Dentofacial Orthopedics Advanced Education Program must meet the following student learning outcomes:

1. Demonstrate diagnostic skills:
  - a. Assemble diagnostic data to enable determination of the degree to which skeletal and dentoalveolar discrepancies contribute to the morphology of the craniofacial complex in three dimensions
  - b. Show competency in the use and application of the American Board of Orthodontics Discrepancy Index
2. Demonstrate the ability to synthesize treatment plans, and implement appropriate therapeutic modalities:
  - a. Correctly determine the appropriate use of dentofacial orthopedics and demonstrate clinical skills in management
  - b. Demonstrate an ability to correctly plan and implement mechanotherapies for correction of dentoalveolar malocclusions
  - c. Develop and implement the appropriate plans for 2 phase mechanotherapy
  - d. Successfully promote interdisciplinary treatment plans
3. Demonstrate the ability to analyze treatment outcomes:
  - a. Correctly determine the appropriate use of dentofacial orthopedics and demonstrate clinical skills in management
  - b. Demonstrate an ability to correctly plan and implement mechanotherapies for correction of dentoalveolar malocclusions
  - c. Develop and implement the appropriate plans for 2 phase mechanotherapy
  - d. Successfully promote interdisciplinary treatment plans

## Program Requirements

The following learning outcomes have been developed and adopted by the faculty. These goals, skills and knowledge every graduate must demonstrate to qualify for graduation. The Department of Orthodontics and Dentofacial Orthopedics require these outcomes be assessed in the classroom, the laboratory, and through treatment of clinical cases over the 30-month program. Their competencies are assessed through examinations, presentations of papers, and clinical treatment comprehensive examinations.

1. Demonstrate a commitment to learning, professionalism, societal responsibility, and contributing to generalizable knowledge through research
2. Demonstrate a commitment to the addressing the concerns of patients and the delivery of quality care.
3. Demonstrate the level of proficiency expected of an orthodontic specialist in the areas of diagnosis, treatment planning, and analysis of treatment outcomes.

## ACADEMIC REQUIREMENTS

Residents enrolled in the Advanced Orthodontics Program must complete the following requirements:

1. Complete a 30-month program of clinical training, didactic course work, and predoctoral teaching.
2. Maintain a 3.0 GPA for 39 credit hours of core curriculum (see below).
3. Be in attendance for at least the stated working hours of program (8:00 AM to 4:30 PM, Monday through Friday) and all program activities as scheduled
4. Meet all program deadlines and specific course deadlines
5. Meet expected standards of performance.
6. Meet Student Learning Outcomes of the Orthodontics Residency program at the UMKC School of Dentistry.
7. Register for and take the Phase II written examination of the American Board of Orthodontics during the second year of residency.
8. Complete a hypothesis-based research project through dual enrollment in the Oral and Craniofacial Sciences MS program.

## RESEARCH REQUIREMENTS

The objectives of the research requirements in the Advanced Education Orthodontic program at the University of Missouri – Kansas City are:

1. To familiarize the residents with systematic methodology of solving problems and making valid conclusions so that they can:
  - a. evaluate scientific literature relative to diagnostic, treatment, and practice methodologies
  - b. select appropriate diagnostic, treatment, and practice methodologies to use in their practice
  - c. solve problems within their practices
2. To meet CODA accreditation guidelines concerning hypothesis-based research.
3. To contribute to the fields of orthodontics, dentistry, and/or science by adding to generalizable knowledge.

All residents complete courses in research methodology and biostatistics. With residents dually-enrolled in the Oral & Craniofacial Sciences program, they will complete their research requirements via the MS degree that is conferred by the School of Graduate Studies. Research requirements for the OCS program are linked to the following courses: BIO-SCI 5751, 5752, 5799 and RES-ME 5703 Thesis Writing. Requirements include developing a hypothesis-based research proposal and completing the research project that leads to a written Thesis and an associated Oral Defense. Requirement specifics and deadlines will be provided to the dually-enrolled residents by the OCS Program Director.

### Required Core Curriculum

Code	Title	Credits
ORTHOD 5741	Orthodontics and Dentofacial Orthopedics 1	1-6
ORTHOD 5742	Orthodontic and Dentofacial Orthopedics 2	1-6
ORTHOD 5743	Orthodontics and Dentofacial Orthopedics 3	1-6
ORTHOD 5744	Orthodontics and Dentofacial Orthopedics 4	1-6
ORTHOD 5745	Orthodontic and Dentofacial Orthopedics 5	1-6
ORTHOD 5746	Orthodontic and Dentofacial Orthopedics 6	1-6
ORTHOD 5747	Orthodontic and Dentofacial Orthopedics 7	1-6
ORTHOD 5748	Orthodontics and Dentofacial Orthopedics 8	1-6
ORTHOD 5726	Cephalometrics 1	2
ORTHOD 5727	Cephalometrics 2	2
BIO-SCI 5706	Growth & Development 1	1
BIO-SCI 5710	Genetics and Biochemistry of Cranial Facial Biology	2
BIO-SCI 5739	Biomaterials for the Dental Specialist	1
BIO-SCI 5740	Oral Pathology	2
BIO-SCI 5760	Physiology of Oral Mineralized Tissues	2
BMS 9701	Clinical Anatomy of Head and Neck	2
RES-ME 5700	Introduction to Research Methodology	2
RES-ME 5704	Introduction to Biostatistics	2
BIO-SCI 5751	Elements of the Scientific Method	1
BIO-SCI 5752	Research Methods in Oral and Craniofacial Sciences	2
BIO-SCI 5799	Research And Thesis	6
RES-ME 5703	Thesis Writing	1

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