

**BOSTON UNIVERSITY INSTITUTE FOR DENTAL RESEARCH
AND EDUCATION DUBAI**



CATALOG

2009 – 2010

Message from Chief Academic Officer

Welcome to Boston University Institute for Dental Research and Education Dubai (BUIDRE). As a reputable and well known urban and research institution, Boston University is excited to establish a postdoctoral dental institution in Dubai Healthcare City. BUIDRE intends to assist Dubai Healthcare City in fulfilling its mission of becoming an “Integrated Center of Excellence in the region for specialist medical and clinical services, medical education and life science research.”

BUIDRE offers a three year combined Certificate of Advanced Study (CAGS) and Master of Science in Dentistry (MSD) degree program in the following specialties:

- Endodontics
- Orthodontics and Dentofacial Orthopedics
- Pediatric Dentistry
- Periodontology
- Prosthodontics
- Oral and Maxillofacial Surgery, a five-year program, to be offered in 2013.

BUIDRE will provide countless opportunities for education, research, community service, and patient care. Residents who join the BUIDRE become part of a community of learners and researchers in one of the most academically stimulating cities in the region.

I hope you take time to read BUIDRE’s Catalog and to explore our programs and learn how to apply.

Sincerely yours,

Steven M. Morgano DMD
Chief academic Officer
Chief Executive Officer

Licensure

Boston University Institute for Dental Research and Education Dubai located at Oud Meitha Road in Dubai Healthcare City is officially licensed from 14th of February 2008 to 13th of February 2013 by the Ministry of Higher Education and Scientific Research of the United Arab Emirates to award degrees in higher education.

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Mission Statement

The mission of Boston University School of Dental Medicine is to:

- provide excellent education to dental professionals throughout their careers,
- shape the future of dental medicine and dental education through research,
- offer excellent health care services to the community,
- participate in community activities,
- and to foster a respectful and supportive environment.

The Boston University Institute for Dental Research and Education Dubai (BUIDRE) shares this mission. The BUIDRE intends to assist Dubai Healthcare City in fulfilling its mission of becoming an “Integrated Center of Excellence in the region for specialist medical and clinical services, medical education and life science research.”

BUIDRE’s mission is to become:

- an academic center providing dental education programs comparable to Boston University’s postdoctoral dental education programs and providing science-based continuing dental education to professionals in the region,
- a center for dental research and dental research training,
- a high-quality, full service, preventive oriented dental care center.

A Brief History of BUIDRE

Boston University is the fourth largest private university in the US and one of the nation's premier research universities. The Boston University School of Dental Medicine was founded in 1963 as the first school in the US dedicated exclusively to postdoctoral education. It is an integral component of Boston University and Boston University Medical Center, and has become an internationally recognized institution for dental education and research. With a faculty of more than 325 educators, clinicians, and researchers and more than 250 staff members, the school offers a full spectrum of postdoctoral specialty educational programs, a complete range of graduate programs and degrees, and pre-doctoral education to more than 700 dental residents.

Dubai Healthcare City is a free trade zone in the Emirate of Dubai which has been developed with the goal of becoming a world-class academic medical campus centered on a teaching hospital, postgraduate medical school, and a postgraduate dental institute. Between 2004 and 2007, Dubai Healthcare City and Boston University developed plans to establish, within Dubai Healthcare City, a postgraduate dental education, patient care and research institute. The Boston University Institute of Dental Research and Education Dubai was founded in 2007 and academic and clinical programs commenced in July 2008.

Goals and Objectives of BUIDRE

MISSION 1. To provide excellent education to dental professionals throughout their careers.

GOAL 1. Emphasize rigorous scholarship and high academic standards.

- 1.1.1. BUIDRE will increase courses that incorporate evidence-based activities every year until such time that 90% of the courses are compliant.
- 1.1.2. BUIDRE will increase courses using learning approaches that integrate basic, medical, behavioral and dental sciences every year until such time that 90% of the courses are compliant.

GOAL 2. Attract, recruit, enroll and retain a diverse resident body with high qualifications.

- 1.2.1. BUIDRE will identify the best predictors of resident performance for selecting highly-qualified applicants each year.
- 1.2.2. BUIDRE will seek to enroll residents who have participated in community service and research activities.
- 1.2.3. BUIDRE will develop scholarship opportunities for residents.
- 1.2.4. BUIDRE will monitor resident performance to provide educational support services for those residents who are at risk for academic difficulty.
- 1.2.5. BUIDRE will provide an academic environment that supports residents' graduation by the date of their scheduled commencement

GOAL 3. Attract, recruit, hire and retain a diverse faculty and staff with high qualifications.

- 1.3.1. BUIDRE will actively conduct searches for the best-qualified faculty with an emphasis on recruiting faculty who have trained in their specialty in the United States.
- 1.3.2. BUIDRE will apply a process for faculty and staff periodic review, development and promotion.

GOAL 4. Prepare dental specialists to provide oral health services.

- 1.4.1. BUIDRE will provide, evaluate and periodically revise proficiency-based educational programs.
- 1.4.2. BUIDRE will provide an academic environment that supports residents' attainment of proficiency by the date of their scheduled graduation.

- 1.4.3. BUIDRE will provide resources required to attain proficiency for those residents who have not done so by the date of their scheduled graduation.
- 1.4.4. BUIDRE will provide academic and clinical education and resources designed to assist graduating residents to pass a clinical licensure examination in the Emirates.
- 1.4.5. BUIDRE will survey graduating residents regarding their overall satisfaction with the proficiency-based education provided them.
- 1.4.6. BUIDRE will survey graduating residents to assess their perceived degree of preparedness in BUIDRE-developed proficiencies.

GOAL 5. Provide opportunities for continuing education and professional development.

- 1.5.1. BUIDRE will provide continuing education courses for dental and allied dental professionals that reflect advances in oral health care and associated disciplines.

MISSION 2. To shape the future of dental medicine and dental education through research

GOAL 6. Maintain excellence in and support growth of faculty research.

- 2.6.1. BUIDRE will provide resources for the development of clinical and applied research.
- 2.6.2. BUIDRE will provide resources for the development of health services research.

GOAL 7. Provide opportunities for residents to participate in research.

- 2.7.1. BUIDRE will develop the curriculum to include evidenced-based approaches to science for residents and faculty.
- 2.7.2. BUIDRE will seek opportunities to increase resident participation in national and international meetings.
- 2.7.3. BUIDRE will recognize resident research accomplishments through displays, awards and honors.

MISSION 3. To offer excellent health care services to the community

GOAL 8. Provide outstanding oral health care services within BUIDRE.

- 3.8.1. Patients will have received appropriate clinical services.
- 3.8.2. Patients will rate their satisfaction with services as “very satisfied” or “for the most part satisfied.”

- 3.8.3. Any patient not satisfied with the dental care suggested or delivered by BUIDRE will be provided with opportunities to register their complaints and have them addressed.
- 3.8.4. Patient records audited for accuracy and completeness each year will meet all published objectives.
- 3.8.5. Patient records reviewed by faculty regarding the design and completion of treatment plans, transfers, discontinuance and recall of patients will meet published standards.
- 3.8.6. Clinical faculty providing direct patient care or supervising the provision of care by residents will meet established credentialing standards.

MISSION 4. To participate in community activities

GOAL 9. Foster cooperation with other educational, healthcare and research entities.

- 4.9.1. BUIDRE will strengthen the relationship between the practicing community and BUIDRE by offering opportunities for practitioners to participate in continuing education, and BUIDRE-wide events.
- 4.9.2. BUIDRE will develop new partnerships with other organizations that will enhance BUIDRE's mission through clinical care, research, community service, or educational programs.

GOAL 10. Encourage and support resident and faculty participation in community outreach activities.

- 4.10.1. Residents will participate in BUIDRE sponsored community outreach activities each year.
- 4.10.2. Faculty will participate in community outreach activities each year.

GOAL 11. To improve the oral health of underserved populations.

- 4.11.1. New grant requests will be submitted for external funding to support the development of new preventive programs or the continuation of existing preventive programs aimed at improving the oral health of underserved populations.
- 4.11.2. BUIDRE will develop model prevention programs.
- 4.11.3. BUIDRE will seek opportunities to disseminate the prevention programs.

GOAL 12. Support dental and other health professional services in the community.

4.12.1. BUIDRE will provide support for career development for residents and alumni throughout their professional careers.

MISSION 5. To foster a respectful and supportive environment.

GOAL 13. Foster effective communication among all members of BUIDRE and community.

4.13.1. Develop mechanisms that coordinate and enhance communication throughout BUIDRE.

4.13.2 BUIDRE will encourage attendance and/or presentations at national and international meetings by increasing the number of full-time faculty and staff members attending national and international meetings.

Admissions

Standards for Admission

In considering applications, the Admissions Committee places primary emphasis on an applicant's dental school record. The successful graduation from a dental school (DMD, DDS or equivalent) is a requirement for admission to the Boston University Institute for Dental Research and Education Dubai (BUIDRE). The committee takes into account the applicant's grades (the expected minimal cumulative grade point average is 3.0 on a scale of 4.0), class rank, scores on the English proficiency tests, as well as such factors as the quality and difficulty of courses taken, demonstrated clinical expertise, leadership ability, and motivation for postdoctoral study. An applicant's personal statements and letters of recommendation are also important elements in the evaluation.

A personal interview is required of all applicants whose credentials are acceptable to the Admissions Committee. The Admissions Committee will contact selected applicants regarding interview invitations. Interviews are scheduled starting toward the end of October. Every effort will be made to arrange a meeting that is convenient for the candidate. A personal interview does not guarantee acceptance.

Admission acceptance is provisional pending the completion of all application and enrollment requirements as well as your successful completion of your dental degree program.

Application for Postdoctoral Specialty Dental Programs

*Boston University Institute for Dental Research & Education—Dubai
Resident Affairs Office
P.O. Box 505097
Dubai Healthcare City
Dubai, United Arab Emirates
Telephone (971) 4 424 8612 or (971) 4 424 8613 | Fax (971) 4 4248686*

Instructions

Individuals who are interested in applying to a program offered by Boston University Institute of Dental Research and Education Dubai (BUIDRE) should complete the application form on the following pages and submit the printed, signed paper application along with the required supplementary documents and materials to the address indicated above. Please visit our website at www.budubai.ae for further information about our programs at BUIDRE.

This application is for Boston University Institute for Dental Research and Education Dubai programs only.* Individuals who are interested in applying for a dental education program in Boston, Massachusetts, USA, must visit the Boston University School of Dental Medicine website for program information and application instructions at <http://dentalschool.bu.edu/admissions>.

The Advanced Education Programs are accredited by the United Arab Emirates Ministry of Education, Commission for Academic Accreditation.

*** All BUIDRE academic programs are designed to meet the formal educational standards of the American Dental Association Commission on Dental Accreditation (CODA).**

Currently, the CODA does not accredit international specialty programs. However, the Commission is considering revising this policy, and accreditation of international programs may be instituted in the future. Because the structure and curriculum of the programs parallel that of the accredited programs in Boston, the program is already prepared to apply for accreditation without any alterations if the CODA changes its policy and begins international accreditation of specialty programs.

Application Requirements

All materials should be submitted for receipt by December 31, 2007. A complete application includes:

1. Application form: completed, signed and dated. Please write neatly and use dark blue or black ink.
2. Application fee: US \$75.00 (UAE Dirham 276.00)
3. Personal statement: describing your qualifications and objectives.
4. TOEFL OR IELTS score: Applicants for whom English is not the primary language must submit a Test of English as a Foreign Language (TOEFL) score. TOEFL score requirement: internet-based TOEFL (iBT) minimum 85; OR computer TOEFL minimum 213; OR written TOEFL minimum 550.* Information is available at www.toefl.org. The International English Language Testing System (IELTS) exam is a newer English proficiency exam developed for academic institutions. IELTS score requirement: 6.5-7. Information is available at www.ielts.org. An official, original report must be received directly from the agency. Your TOEFL or IELTS score should be from within the last two years.

*An applicant is exempt from the TOEFL requirement if a) the applicant is a native speaker of English who has completed his/her dental education in an English medium institution in a country where English is the official language (India not included) OR if the applicant is admitted to graduate from an English medium institution that can provide evidence of acquiring a TOEFL score of 500, or its standardized equivalent approved by the Ministry of Higher Education and Scientific Research (MOHESR), upon admission to the postdoctoral program.

5. Academic transcripts: official dental school transcript or certified true copy, in a signed and sealed envelope. If you have multiple degrees, you must submit a transcript for each program of study.

6. Course-by-course translation and evaluation of each transcript: provided by Educational Credential Evaluators (ECE Inc.). An official, original report must be received directly from the agency. Information is available at www.ece.org.
7. Diploma: a certified true copy of the diploma for each degree earned.
8. Curriculum Vitae
9. Evaluations/Recommendations: three original, sealed letters of evaluation, including one from the dean of your dental school and two from dental school faculty. Applicants may choose to submit an optional fourth letter from a professional colleague.
10. Photograph of applicant (approximately 5 cm by 5 cm) with the applicant's name written on the back.

Applications are reviewed after all required documents have been received and the application file is complete. It is to the applicant's advantage to complete the application file prior to the deadline, as consideration of the application may begin as soon as the file is complete. Candidates of interest will be asked to participate in a personal interview, which does not guarantee acceptance.

**BOSTON UNIVERSITY INSTITUTE FOR DENTAL RESEARCH AND
EDUCATION DUBAI**

Application Form



APPLICANT'S PERSONAL INFORMATION

Last name _____ First name _____

Middle name _____ Maiden or prior name _____

Gender Male Female Salutation Dr. Mr. Ms. Other _____

Citizenship _____ Passport Number _____

Date of birth: Month _____ Day _____ Year _____

Marital Status _____

Email address _____ Home telephone _____

Work or daytime telephone _____ Cellular telephone _____

MAILING ADDRESS

Street _____

City _____

Province _____

Country _____

Postal code _____

PERMANENT (LEGAL) ADDRESS

Street _____

City _____

Province _____

Country _____

Postal code _____

Applicant's name (printed) _____

Indicate the year of intended entry into the program: July _____

Indicate the specialty in which you are interested:

Endodontics

CAGS/MSD

Orthodontics and Dentofacial Orthopedics

CAGS/MSD

Pediatric Dentistry

CAGS/MSD

Periodontology

CAGS/MSD

Prosthodontics

CAGS/MSD

Oral and Maxillofacial Surgery (Available in 2013; 60 month program)

CAGS/MSD

Applicant's name (printed) _____

EDUCATION INFORMATION

List in chronological order all colleges and graduate or professional schools attended. Use an additional page if necessary:

Institution	Location	Dates Attended	Degree Granted	Area of Specialty

Have you ever been dismissed, expelled, found to have violated an honor code, disqualified, suspended, put on probation, denied re-admission or otherwise been subject to disciplinary action at any academic institution in connection with your conduct or academic performance?

No Yes If yes, please explain.

PROFESSIONAL EMPLOYMENT

Location	Type of Practice	Full-Time/Part-Time	Name of Dentist

Applicant's name (printed) _____

Awards, Distinctions, Prizes

Award **Organization** **Date**

Research Experience

Organization and Topic **Responsibilities** **Dates**

Professional Publications or Presentations **Organization or Journal** **Date**

Professional Memberships

Association **Responsibilities/Activities** **Dates**

Volunteer Experience

Association **Responsibilities/Activities** **Dates**

If there is additional information you would like to provide to support your application, please explain:

Applicant's name (printed) _____

Self-Reported Scores

Dental School Class Rank	
Number of dental graduates in your class	
TOEFL/IELTS score <input type="checkbox"/> Internet-based <input type="checkbox"/> Computer <input type="checkbox"/> Written	
Educational Credential Evaluators (ECE) Transcript Evaluation USA Grade Point Average (GPA)	

Personal Statement of Qualifications and Objectives

Please attach a one or two page personal statement describing your motivation for specialized education and training. Relate your interest to your formal education, current employment, and career aspirations. Please include your full name and program of interest on each page.

APPLICATION CHECKLIST

Submit the following materials, and ensure that each of the supporting materials is clearly marked with your name to aid in identification and completion of your application file. All materials submitted will become part of your application file and will not be returned to you.

- Completed application form
- Application fee of US \$75.00 (UAE Dirham 276.00)
- Personal statement describing your qualifications and objectives
- TOEFL **OR** IELTS score
- Academic transcripts
- Educational Credential Evaluators (ECE) course-by-course evaluation
- Diploma copies
- Curriculum Vitae
- Evaluation from Dental School Dean
- Evaluation from Dental School Faculty 1
- Evaluation from Dental School Faculty 2
- Evaluation from Professional Colleague (optional)
- Photograph

Applicant's name (printed) _____

REFERENCES AND PROFESSIONAL EVALUATIONS

List names and addresses of those individuals providing evaluations.

Dental School Dean

Name _____

Title _____

Institution _____

Address: Office or Department

Street _____

City _____

Province _____

Country _____

Postal code _____

Telephone _____ Email _____

Dental School Faculty 1

Name _____

Title _____

Institution _____

Address: Office or Department

Street _____

City _____

Province _____

Country _____

Postal code _____

Telephone _____ Email _____

Applicant's name (printed) _____

Dental School Faculty 2

Name _____

Title _____

Institution _____

Address: Office or Department

Street _____

City _____

Province _____

Country _____

Postal code _____

Telephone _____ Email _____

Professional Colleague (optional)

Name _____

Title _____

Institution _____

Address: Office or Department

Street _____

City _____

Province _____

Country _____

Postal code _____

Telephone _____ Email _____

I hereby certify that the information submitted in this application is true and correct.

Signature

Date

*You are encouraged to keep a photocopy of your application for your reference.
Letters of evaluation, evaluation forms and transcripts may be sent by the applicant with the application if the materials are each in an envelope sealed and signed across the seal by the evaluator or school.*

Academics

Degree Programs

The Boston University Institute for Dental Research and Education Dubai offers the following degrees:

CAGS is a Certificate of Advanced Graduate Study
MSD is a Master of Science in Dentistry degree

Endodontics	CAGS / MSD
Orthodontics & Dentofacial Orthopedics	CAGS / MSD
Pediatric Dentistry	CAGS / MSD
Periodontology	CAGS / MSD
Prosthodontics	CAGS / MSD
Oral and Maxillofacial Surgery (Available in 2013)	CAGS / MSD

As a dental professional, you recognize the importance of lifelong learning to advance your career and better serve your patients. At Boston University Institute for Dental Research and Education—Dubai (BUIDRE), we are committed to furthering this learning process, offering a dynamic and complete selection of postdoctoral education programs.

Postdoctoral education and training at BUIDRE is unique. Because of our many postdoctoral programs we offer unmatched opportunities for research and cross-discipline discussion, such as our combined Grand Rounds course. As part of an academic health center we treat patients with complex medical issues. Our patient pool is diverse and partnerships with our community give our residents the chance to work directly with people in the region and surrounding communities.

From endodontics to orthodontics, and prosthodontics to pediatric dentistry, our faculty are experts in their fields and offer the latest in technology and research to advance your career.

Certificate of Advanced Graduate Study (CAGS)

BUIDRE has developed rigorous and challenging specialty programs in which residents first establish a firm theoretical foundation through a group of well-designed courses and then assume responsibility for direct patient care with close supervision and feedback.

BUIDRE has a special commitment to outstanding patient care. One manifestation of this commitment is our excellent and experienced faculty who work intensively with residents on a one-to-one basis.

Master of Science in Dentistry (MSD) Degree

Residents who are admitted to a CAGS program will concomitantly pursue the Master of Science in Dentistry (MSD) degree. The programs are combined clinical and research programs.

Residents will have three years of clinical experience and three years to develop a research proposal, collect data, write and defend their theses. The amount of time devoted to research, didactic education and clinical practice varies from program to program because each program is designed to follow standards established by the US Commission on Dental Accreditation, and accreditation standards vary for each program

Candidates for the MSD degree are required to pass all assigned courses and demonstrate progress in their area of research throughout the three years of the program. Candidates plan their courses in consultation with the major advisor and in accordance with the requirements of their major field. Coursework may be in formal courses, seminars, and research in proportion to the particular needs and backgrounds of the candidates as determined in consultation with the major advisor. Requirements for the MSD degree include completing a research project and thesis of professional caliber under faculty supervision. Residents will develop the ability to focus, analyze, and organize complex data to address an issue in a way that contributes to the literature.

CAGS / MSD

The goal of the combined CAGS/MSD program is to prepare graduates for productive careers in both basic research and clinical dentistry. Consequently, the program requires a research thesis. The degree/certificate program requires a minimum of three years of study and leads to both the CAGS in the dental specialty and the MSD degree. The program may be longer than three years depending on specific departmental requirements. In the CAGS/MSD program, the specific course requirements of the MSD degree can be satisfied by the regular CAGS curriculum. The remainder of courses required for the MSD degree can, therefore, be fulfilled through directed study and research credits.

General Policies for Graduate Programs

Academic Credit

The academic year is divided into two semesters. There is also a summer session (July-August). A credit hour (or semester hour) is equivalent to one class hour per week or approximately fifteen hours per semester. There is no credit-hour requirement for successful completion of a program. Credit hours are assigned to each course for the purpose of weighting each course to allow calculation of grade point average.

Methods for Assessing Resident Participation in the Learning Process

Residents' performance is evaluated by using multiple measures over time, which are reviewed semi-annually. Evaluation of residents' performance includes the evaluation of clinical performance by using proficiency measures, patient presentations, course grades, incident and noteworthy incident reports, record reviews, and self-evaluation of performance. Faculty evaluation and self-evaluation of performance are essential aspects of the learning process. Building self-assessment skills assists residents in better monitoring and adjusting their learning as they work toward clinical proficiency in the program. Once they graduate they will need to

rely on their self-assessment skills to further refine their knowledge and skills in the specialty as they shift from proficiency towards mastery. Studies have shown that one major factor that discriminates highly successful clinicians from average ones is a refined ability to self-evaluate performance both during and after the delivery of care. Therefore, the Program Evaluation Plan couples faculty evaluation of performance with residents' self-evaluation activities to support the future success of residents after completion of the program. In addition to residents' continuous evaluation and feedback to support effective learning, residents also evaluate the quality of the program and its teaching effectiveness.

Research Project and Thesis

A research advisor is assigned to each resident. The advisor is a faculty member of BUIDRE and is responsible for the selection of a research project, the supervision of all phases of the research project, academic guidance, evaluation of progress, and assistance in writing of the thesis. The thesis project will teach scientific methodology, research techniques, approaches to research questions, development of a hypothesis, data analysis, and the presentation of data. The resident is expected to participate in regular research meetings with the research advisor. After completion of the thesis project the resident is required to write a thesis. Research projects will be supervised by full-time, on-site BUIDRE faculty members. Faculty members from Boston University may act as second or third readers in the thesis defense process. Dr. Harold Goodis, professor of Endodontics, serves as the Senior Research Mentor and oversees all research activities at BUIDRE.

Resident progress will be monitored and evaluated at regular intervals of not more than one semester duration by the resident's Thesis Defense Committee. The Chief Academic Officer is responsible for selecting faculty members to serve on the committee which will be comprised of all faculty who serve as research advisors for the program and may include additional faculty. Research advisors are required to present an evaluation of the resident's activities with respect to the academic performance, research quality, research quantity, and attitude towards achieving his/her goals. The committee may make recommendations with respect to changes in the resident's project. The committee is responsible for grading each resident's performance. Unsatisfactory performance requires recommendations regarding remedial efforts (with or without prolongation of the program) or termination. The Chief Academic Officer will communicate with each resident the findings of the committee. Successful completion of the program requires the completion of a thesis according to BUIDRE guidelines and the presentation of the research project in a thesis defense. Each thesis is evaluated by a first reader (advisor) and in some cases a second reader or a third reader (selected by the Thesis Defense Committee). The Thesis Defense Committee reviews the final drafts of the resident's thesis, provides input for the changes, and makes a final recommendation for the grade and for awarding the degree.

For detailed instructions on thesis format and requirements, refer to the "Guidelines for Thesis Submission" in Appendix IV of the Resident Handbook.

Outline of Study

An outline of the research project, approved and signed by the research advisor, shall be submitted for the approval of the resident's Program Director and the Senior Research Mentor by

the end of the first academic year. This protocol also must be submitted to the BUIDRE primary research advisor.

Deadlines for Submission of Thesis or Dissertation

Theses must be submitted to the reader(s) eight (8) weeks prior to the anticipated date of the defense to allow ample time for the thesis to be read and for corrections/revisions to be made. Delay in submission may result in postponement of the date of graduation, which, in turn, may result in additional tuition fees.

Institutional Review Board (IRB)

Under DHCC regulations, an IRB is an appropriately constituted group that has been formally designated to review and monitor biomedical research involving human subjects. In accordance with regulations, an IRB has the authority to approve, require modifications in (to secure approval), or disapprove research. This review group serves an important role in the protection of the rights and welfare of human research subjects.

Policies Regarding Residents in Combined Programs

Residents in combined programs that offer a certificate and research degree must complete the requirements of each program before they are awarded their certificate and degree. Residents will not receive their research degree until they have completed their CAGS program. Residents will not receive their certificate until the research project has been submitted, defended and approved.

Time Limit

The program shall be completed within four years after the first registration for study leading to the MSD degree.

Grading Policy

Grading Scale

- A = 4.0
- A- = 3.7
- B+ = 3.3
- B = 3.0
- B- = 2.7
- C+ = 2.3
- C = 2.0
- C- = 1.7
- D = 1.0
- F = 0.0
- I = Incomplete
- W = Withdrawn
- Y = Continuing course (multi-semester course, grade awarded at completion of course)

Weighting of Course Grades (Credits)

Each course is assigned a number of credits. Credit assignment is for the sole purpose of calculating an overall grade point average. For a continuing course (a course that runs through more than one semester) the grade and credits are earned at the completion of the course. Graduation is not dependent on accumulating a certain number of credits. Each postdoctoral program has a fixed curriculum and graduation is dependent on passing all courses in the curriculum, demonstrating clinical proficiency in the specialty, and completing a research project, writing a thesis and a thesis defense.

Please note that there are no A+, D+, D-, F+ or F- grades. A grade of "I" (incomplete) as an interim grade is only awarded in special circumstances such as an inability to complete course work due to illness or personal reasons beyond the resident's control and acceptable to a course director. An interim grade of "I" (incomplete) will not be recorded as a final grade. If the resident has not rectified the "I" by no later than 30 days after the close of the semester, the grade will be recorded as W (withdrawn) or F.

Resident promotion requires satisfactory completion of all course requirements, both clinical and didactic, and the maintenance of professional ethical standards

Determination of Grades

The methods by which grades are allocated are determined by the course director. Didactic courses are to be *criterion reference* graded. Criterion referencing infers that there are *predetermined* cut-off points or standards matching numerical or percent grades with corresponding letter grades. (Example: 90-100=A, 80-89=B, 70-79=C, 60-69=D, below 60=F). Norm referencing, which infers that letter grades are assigned to a comparative curve or scale of all the numerical grades in a given examination or course, is not used in the Institute.

Preclinical or clinical courses also use criteria-referenced grading, by using BUIDRE's defined competencies and associated criteria of evaluation. Criterion referencing compares residents' work to pre-determined criteria for excellence or goals for the task or project to be graded. The mechanisms for applying criterion-referenced grading must be communicated to the resident in a clear fashion (in writing) at the beginning of the course.

Weighting of Course Work

The relative weighting of the various examinations, practical projects or clinical procedures which make up the final course grade is at the discretion of the course director and will be *clearly provided to the resident at the beginning of each course in the course syllabus*. Flexibility in weighting of course work is not inappropriate but options (such as dropping the worst test score, etc.) must be made known to the residents at the beginning of the course.

Posting Grades

Course directors must inform residents of the course grade within ten (10) business days of the final exam or end of the course. Course directors may elect to send grades via email to residents.

Grade Point Requirement and General Policy Regarding Deficient Grades

Residents are expected to maintain a grade point average of 3.0. Grades of “F” or “D” are not acceptable for promotion from year to year or for successful completion of a postdoctoral program. If the Program Director or Curriculum Committee allows a resident with a deficient grade to remain in a program, that deficient grade must be rectified. A grade of “F” must be rectified by repetition of the course. A grade of “D” may, at the discretion of the course director, be remedied by a written or oral re-examination or completion of an assigned project.

When a resident repeats a course in its entirety, the resident may be awarded the grade earned for that course. When a deficiency grade is rectified by repeating a course, the original grade remains on the resident’s transcript and a new grade is recorded for the year the course is retaken along with the designation “ Repeat or RP”. Successful completion of a remediation option short of repetition of a course in its entirety will result in a grade improvement from a “D” to a “C-”. Improvement of a grade of “D” by this means will be recorded in the transcript as a “C-” with the designation “Remediate or RM”.

Remediation of Deficient Grades

Recommendations for scheduling of re-examinations, remediation projects or clinical practical exams for remediation of course failure should be communicated to the Curriculum Committee for review and approval. Furthermore, remediation programs or examinations of any type with the goal of improving a final grade should not be offered to a resident without approval of the Curriculum Committee. Residents with final grades of "D" will be considered by the Curriculum Committee for the option to take any scheduled re-examination. All residents will be informed no later than three weeks prior to the announced dates for re-examination. Upon notification of approval to take re-examination(s), the resident must contact the appropriate course director(s) involved to confirm the intention to be present for the re-examination and the resident must be present on the scheduled date(s). No substitute dates are permitted.

The specific option for remediation of a resident’s deficient grade is determined by the course director and is based on the *course director's judgment* as to the nature of the resident’s deficiencies and as to the resident’s ability to demonstrate mastery of the course material within a given period of time. For example, one resident who demonstrates limited minor conceptual deficiencies may be given a re-examination after a short period of study and tutoring; while it may be in the best interest of another resident who demonstrates a complete lack of understanding of course material to be required to repeat the course. All such remediation decisions must be approved by the Curriculum Committee prior to implementation.

Options for remediation of deficiencies in a didactic course may include:

- Written exam after a review/tutorial period.
- Oral examination.
- Successful completion of a comparable program outside of BUIDRE, the content of which must be acceptable to the course director.
- A written paper or essay project.
- A repetition of part of the course.
- A repetition of the course in its entirety.

Options for remediation of deficiencies in a laboratory course may include:

- A special practical exam.

- A remedial period of laboratory work with specific goals or practical examinations.
- Repetition of part of the course.
- Repetition of the course in its entirety.

Options for remediation of deficiencies in a clinical course may include:

- A remedial period of clinical work with specific goals.
- Repetition of the clinical course (entire rotation or year).

A resident who repeats a course in its entirety may be awarded any grade for the course. When a failed course is repeated in its entirety, both the original failing grade and the newly awarded grade will appear in the transcript. As the process of remediation may extend past the end of the academic year, the original grade is the basis for computation of the resident's grade point average for that year. The new grade will be weighted into the following year's grade point average computation.

In general, remediation of failure is applicable for a failing final course grade. Remediation of failure of a single examination or project (quiz, progress exam, mid-term exam, final exam) is not necessary and in most instances inappropriate as scheduling multiple retake examinations during the academic year is disruptive. However, where a single examination is critical for certification or progression from one area of instruction to another, timely remediation of an individual examination maybe appropriate. Examples might be C.P.R. certification examinations or clinical certification examinations during a preclinical course.

Remediation of Grades other than Failure

In general, short of repeating an entire course, there are no options for improving an existing passing grade (A, B, C) through re-examination or other remedial work.

Written Examinations

1. An instructor will proctor all examinations. Adequate proctors must be available for each room used in the administration of the examination.
2. Rooms should be sufficiently large enough for adequate separation of residents. Advance scheduling of all examinations will allow the scheduling of additional classrooms if necessary.
3. Policy statements regarding cheating and consequences of cheating must be discussed with residents prior to each examination.
4. Proctors should actively circulate throughout the room observing residents' behavior.
5. If a resident is suspected of trying to get or give information during an examination, the following actions must be taken:
 - a. alert a second proctor (if appropriate);
 - b. proctors shall observe the situation as unobtrusively as possible;
 - c. if proctors observe enough evidence that cheating is occurring, the names of involved residents must be noted and reported to the supervising faculty member;
 - d. the supervising faculty member shall provide a written report of the infraction to the course director and Program Director;
 - e. the course director or Program Director shall provide a written report of the incident to the Chief Academic Officer;

- f. the results of the examination(s) of the resident(s) in question shall be withheld by the course director until such time as a determination is made.

Clinical and Preclinical Practical Examinations

1. All faculty members in the clinic should be aware of which residents are taking a practical examination. This may be facilitated by posting a card on the operatory wall at the time of practical examinations.
2. If a resident is suspected of trying to cheat during a practical examination, the following actions must be taken:
 - a. alert a second proctor
 - b. proctors shall observe the situation as unobtrusively as possible
 - c. if proctors observe enough evidence that cheating is occurring, the names of involved residents must be noted and reported to the supervising faculty member
 - d. the supervising faculty member shall provide a written report of the infraction to the course director and Program Director
 - e. the course director or Program Director shall provide a written report of the incident to the Chief Academic Officer.
 - f. the results of the examination(s) of the resident(s) in question shall be withheld by the course director until such time as a determination is made.

Examination Review Policy

In keeping with BUIDRE's philosophy that examinations and testing situations should be educational as well as evaluative in nature and to ensure timely reporting of performance to residents, instructors shall follow the policies below:

1. Written Examinations: Examinations must be corrected, graded and returned to residents for discussion of the questions with the class as a whole within two weeks in case of multiple choice exams and three weeks in the case of essay or combined essay/multiple choice exams.
2. Preclinical Laboratory Examinations: Materials, including teeth, restorations and other prostheses, and grades, along with a written evaluation, will be returned to the resident within three weeks.
3. Clinical Practical Examinations: Written evaluation must be supplied to the resident within two weeks after the practical examination. It is directed that each program giving clinical exercises or practical examinations develop a standard, uniform, grade sheet to be utilized by those faculty giving the examination. A copy of this grade sheet, with appropriate comments, is given to the resident upon completion of the examination.

Process for Recording Grades

The office of the Residents' Services Manager will email grade sheets and grading policies to each course instructor.

Instructors will be required to submit completed grade sheets to the Office of the Residents' Services Manager and the Chief Academic Office within ten business days of the last class or final examination.

The Office of the Chief Academic Officer will review course final grades and contact the resident and the resident's department of any deficient grades (D or F). For residents who receive a grade of "F", the Chief Academic Officer will notify the resident that repetition of the course is necessary. For residents who receive a grade of "D", the Office of the Chief Academic Officer will discuss arrangements with the course director for a re-examination. Please keep in mind that the course director has sole discretion to determine whether it may be in the best interest of a resident who received a grade of "D" to re-take the course in its entirety and not offer a re-examination.

Incomplete grades must be resolved no later than 30 days after the close of the semester.

The Office of the Residents' Services Manager will forward transcripts to Program Directors twice each year, in January and July. Programs may request transcripts, for academic review and advising. When requesting transcripts, departments must give the Residents' Services Manager a minimum of 10 working days to prepare residents' transcripts.

Programs must submit grades to the Residents' Services Manager on a grade sheet within ten business days of the end of each semester. Course name, number and final grade must be included. Programs are responsible for submitting research grades for each resident. Research advisors must submit grades to the Office of the Residents' Services Manager within ten business days of the completion of each academic year.

Academic Programs

Endodontic Program

Certificate of Advanced Graduate Study in Endodontics and Master of Science in Dentistry in Endodontics

The MSD in Endodontics is a three-year program in which a Master of Science in Dentistry degree is combined with a CAGS in endodontics.

Intensive training is given in clinical endodontics and correlated basic and medical sciences, and in other dental subjects related to the practice of endodontics. Supervised clinical training encompasses both surgical and nonsurgical endodontics, ensuring clinical proficiency in these areas. Extensive opportunities exist for combined treatment of endodontic-periodontic problems and for endodontic management of teeth involved in major oral rehabilitative procedures.

All residents must be prepared to meet the scholarly requirements that familiarize them with the development of endodontic theory and practice and an evidence-based approach that permits an intelligent evaluation of current and future technologies and materials.

Academic Requirements

Residents must successfully complete all required courses as outlined in this Endodontic Program Manual and must achieve all competencies and proficiencies. Failure to do so in any course will result in the resident's failing to earn his/her academic degree/certificate. Each postdoctoral program has a fixed curriculum and graduation is dependent on passing all courses in the curriculum, demonstrating clinical proficiency in the discipline, completing a research project, and writing and defending a thesis.

Seminars

Residents in advanced specialty education programs in endodontics actively participate in seminars or conferences in which they present and participate in the evaluation of diagnostic data, treatment planning, treatment procedures, and outcomes assessment.

During the course of study, each resident will be responsible for preparing a variety of seminars. Each seminar will be assigned to residents who will review the literature and prepare reading lists. Following the seminar, the resident who acts as moderator will be responsible to see that each section is typed, assembled and turned in to the Program Director.

Clinical Rotations

Residents will participate in clinical rotations in pediatric dentistry, oral surgery, anesthesia, and pediatric orthodontics. Residents are scheduled in the clinic five days a week (Sunday – Thursday) for a total of 40 hours. Classes are held either before clinic from 8 am-9 am or after clinic from 5:30 pm-7 pm.

Only those cases which have been properly typed, cost estimated, contracted, paid, and treated to the advisor's satisfaction will be accepted as completed clinical procedures.

Case Presentations

At selected times during the academic year the residents will be required to present case reports and patients records to his/her faculty advisor. These sessions will be utilized to assess resident progress, identify any problems or shortcomings, and institute remedial measures.

Research

Residents who are admitted to a Certificate of Advanced Graduate Studies (CAGS) will concomitantly pursue the Master of Science in Dentistry (MSD). The programs are combined clinical and research programs. Residents will have three years of clinical experience and three years to develop a research proposal, collect data and write and defend their thesis. In any one year, residents will spend approximately 1/3 of their time pursuing research and 2/3 of their time in clinical study and practice. On completion of the requirements, the MSD degree is awarded either in the same area as the CAGS or Dental Public Health. The MSD is not offered with the Advanced Education in General Dentistry program.

Candidates for the MSD degree are required to pass all assigned courses and demonstrate progress in their area of research throughout the three years of the program. The number of courses that may be transferred to an MSD program is explained in more detail in the Policy on Transfer of Courses and Course Exemption in the BUIDRE Policies and Procedures Manual. Core courses that will be required of all residents doing research are in epidemiology, biostatistics, and research writing. Additionally courses are planned by candidates in consultation with the research advisor and in accordance with the requirements of their major field. Coursework may be in formal courses, seminars, and research in proportion to the particular needs and backgrounds of the candidates as worked out in consultation with the research advisor. Requirements for the MSD include completing the core courses and a major research project and thesis of professional caliber under faculty supervision. The goal is for residents to develop the ability to evaluate the existing literature, focus, organize and analyze complex data to address an issue in a way that contributes to the literature.

The MSD degree entails a research project and thesis and is an integral component of the 36-month program. Depending on the time needed to complete the research component, additional time beyond the 36 months may be necessary for successful completion of the MSD degree. Other coursework may be assigned at the discretion of the research advisor.

Thesis

A research thesis is required. Guidelines for thesis preparation will be provided to candidates by their program director. The thesis is to be based on a research project carried out by the candidate. The topic for a thesis will be chosen by the candidate in conjunction with the faculty advisor. The major areas of focus are clinical, epidemiological or public health research. In

certain cases, field projects or systematic reviews with a meta-analysis of the literature may be acceptable.

Residents must initiate and complete a research project using the elements of scientific method, including research design, accurate reporting, critical thinking and the formulation of conclusions based upon scientific data rather than opinion. Collaboration with other hospitals, medical institutions and other health-orientated organizations is encouraged to foster collaborative research.

Residents will be assigned a research advisor within the CAGS Program with the approval of the appropriate clinical research or dental public health directors at Boston University. The resident must work closely with the research advisor to ensure satisfactory progress. The research protocol will be developed within the first 6 months of the program. Implementation and data collection will commence after Institutional Review Board approval (research ethics committee approval (where appropriate) and other regulatory approvals. It is anticipated that data collection will be complete no later than 4 months before graduation to allow for data analysis, thesis preparation and defense of the thesis (optional depending on the program). Guidelines for Thesis Dissertation Submission are provided in the Resident Handbook, Appendix IV.

Competencies and Proficiencies

The goal of the Endodontics program is to prepare a specialist who possesses the knowledge and skills required to diagnose, understand the basis of, and proficiently treat, alone or in concert with other dental and medical practitioners, endodontic problems and their related diseases. The program encourages the development of a critical and enquiring attitude that is necessary for the advancement of practice, research and teaching in the specialty of Endodontics.

The educational program provides instruction at the in-depth level and clinical training at the competency level for the resident to:

1. Provide vital pulp therapy;
2. Perform root-end closure procedures;
3. Evaluate, diagnose and manage traumatic injuries to teeth and their supporting structures;
4. Provide endodontic treatment for the medically compromised patient;
5. Develop a differential diagnosis of orofacial pain;
6. Diagnose and treat periodontal disease and defects in conjunction with the treatment of the specific tooth undergoing endodontic therapy;
7. Place intraradicular restorations and cores in endodontically treated teeth;
8. Perform non-surgical and surgical endodontic procedures using microscopy;
9. Perform intracoronary bleaching procedures.

The educational program provides in-depth didactic instruction and clinical training to the level of proficiency for the resident to:

1. Collect, organize, analyze and interpret data from the medical and dental histories and clinical evaluation to determine their relationship to the patient's endodontic treatment;

2. Perform tests and clinical examinations and interpret the significance of the data in the differential diagnosis of clinical conditions arising from injury to and pathosis of pulp and periradicular tissues;
3. Expose, process, and interpret radiographs and/or take and interpret digital images;
4. Establish differential interpretation of lesions and normal anatomic structures through radiographs or digital images;
5. Formulate a diagnosis, prognosis, and treatment plan for conditions that require endodontic treatment in support of the total oral health of the patient, requesting information/consultation from other healthcare professionals as needed;
6. Provide appropriate emergency treatment to relieve pain and resolve infections of endodontic origin;
7. Recognize and manage, or prevent, endodontic pain and associated anxiety using physical, chemical and psychological modalities;
8. Provide non-surgical and surgical endodontic treatment;
9. Retreat endodontically-treated teeth using both non-surgical and surgical techniques;
10. Evaluate the results of endodontic treatment and determine whether additional evaluation/treatment is required;
11. Provide space for intraradicular restorations and cores in endodontically treated teeth;
12. Communicate to patients the nature of their endodontic conditions and the value of treatment to their overall oral health;
13. Communicate with other health care professionals, interpreting their assessments and integrating this information into the treatment of the patient.

Endodontic Curriculum

A word on Distance Education:

Most classes and all clinical and research activity will take place at the BUIDRE facilities in Dubai. Some coursework will be presented electronically from Boston University School of Dental Medicine. Courses presented via distance education technology are indicated in the following course listings. In most cases these courses are intended to be viewed in a classroom setting with BUIDRE faculty present to stimulate discussion and answer questions. However, these courses will also be available on the internet for resident's independent review.

Please note that there is no required number of credits to graduate. Completing all coursework is required for graduation. Credits are assigned only for weighting courses for calculation of grade point average.

Interdisciplinary (IDC) courses are indicated below. IDC course descriptions can be found on page 76 of this catalog.

Year 1

EN 803 Endodontics III: Preclinical Endodontics 1 cr, 1st sem.

EN 804 Endodontics IV: Current Concepts in Endodontics 2 cr, 1st and 2nd sem.

EN 805 Endodontics V: Topical Literature 2 cr, 1st and 2nd sem.

EN 811 Seminar: Endodontic Diagnosis and Treatment Planning 1 cr, 1st and 2nd sem.
EN 814 Seminar: Restoration of Endodontically Involved Teeth .5 cr, 1st sem.
EN 815 Surgical Endodontics .5 cr, 2nd sem.
EN 821 Seminar: Current Literature 2 cr, 1st and 2nd sem.
EN 824 Seminar: Case Presentation 1 cr, 2nd sem.
EN 910 Clinical Endodontics 12 cr, 1st and 2nd sem.
EN 991 Research: Endodontics 6 cr, 1st and 2nd sem.
OB 761 Oral Microbiology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
OB 763 Basic Processes in Oral Biology 2cr, 1st and 2nd sem. **(IDC, Distance Education BU)**
OB 767 Oral Immunology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
OB 830 Research Writing 1 cr, 1st sem. **(IDC, Distance Education from BU)**
OS 761 Medical Concerns of the Dental Patient 1 cr, 1st and 2nd sem. **(IDC)**
OS 828 Pain and Anxiety Control 1 cr, 2nd sem. **(IDC)**
OS 831 Head and Neck Anatomy 1 cr, 1st sem. **(IDC, Distance Education from BU)**
PA 801 Oral and Maxillofacial Pathology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
PE 764 Current Concepts in Periodontology 1 cr, 1st sem. **(IDC)**
PE 817 Seminar: Grand Rounds 2 cr, 1st and 2nd sem. **(IDC)**
PE 827 Applied Dental Pharmacology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
PH 763 Bioethics and Law 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
PH 803 Biostatistics 1 cr, 1st and 2nd sem. **(IDC, Distance Education from BU)**

Year 2

EN 806 Endodontics VI: Topical Literature 2 cr, 3rd and 4th sem.
EN 812 Seminar: Endodontic Diagnosis and Treatment Planning 1 cr, 3rd and 4th sem.
EN 822 Seminar: Current Literature 2 cr, 3rd and 4th sem.
EN 825 Seminar: Case Presentation 1 cr, 3rd and 4th sem.
EN 911 Clinical Endodontics 12 cr, 3rd and 4th sem.
EN 992 Research: Endodontics 6 cr, 3rd and 4th sem.
PE 818 Seminar: Grand Rounds 2 cr, 3rd and 4th sem. **(IDC)**

Year 3

EN 823 Seminar: Current Literature 2 cr, 5th and 6th sem
EN 826 Seminar: Case Presentation 1 cr, 5th and 6th sem.
EN 912 Clinical Endodontics 16 cr, 5th and 6th sem
EN 993 Research Endodontics 8 cr, 5th and 6th sem
PE 819 Seminar: Grand Rounds 2 cr, 5th and 6th sem. **(IDC)**

Endodontic Course Descriptions

EN 803 Endodontics III: Preclinical Endodontics

Prerequisite for clinical program. Participation in endodontic procedures performed on extracted teeth. Lectures and clinical demonstrations by the endodontic faculty cover the range of clinical

procedures to be perfected by residents during the clinical phases of training. 1 cr, 1st sem.

EN 804 Endodontics IV: Current Concepts in Endodontics

A series of lectures presented to residents enrolled in the Postdoctoral Program in Endodontics. The intention of this course is to expose the resident to the most current information pertaining to such topics as: histology and physiology of the pulpo-dentinal complex; diagnosis and classification of endodontic pathoses; management of endodontic emergencies, traumatic injuries to the dentition, and fascial space infections of odontogenic origin; evaluation of endodontic success; and the relationship between oral and systemic disease. 2 cr. 1st and 2nd sem.

EN 805, 806 Endodontics V, VI: Topical Literature

A series of 27 seminars based on intensive and comprehensive readings in the literature of endodontics covering all facets pertaining to the science and practice of endodontics. 2 cr, 1st, 2nd, 3rd and 4th sem.

EN 811, 812 Seminar: Endodontic Diagnosis and Treatment Planning

Develops logical approaches to endodontic diagnosis and treatment planning procedures. Includes discussion of a wide range of endodontic problems not usually encountered in clinical courses. 1 cr, 1st, 2nd, 3rd, and 4th sem.

EN 814 Seminar: Restoration of Endodontically Involved Teeth

Presentation of rationale and operative procedures best employed in restoring endodontically treated teeth and in using them as long-term abutments for prosthetic appliances. .5 cr, 1st sem.

EN 815 Surgical Endodontics

Comprehensive series of lectures and laboratory exercises designed to provide the resident with the knowledge and technical skills to perform proficiently surgical endodontic procedures. The most current techniques and state-of-the-art instruments and materials available for endodontic surgery are discussed and used in the laboratory exercises. .5 cr, 2nd sem.

EN 821, 822, 823 Seminar: Current Literature

Monthly seminars that comprehensively review the most recent scientific and dental literature pertaining to the practice of endodontics. 2 cr, 1st, 2nd, 3rd, 4th, 5th, and 6th sem.

EN 824, 825, 826 Seminar: Case Presentation

Weekly seminars that provide the opportunity for the postdoctoral endodontic resident to present and discuss his/her assigned cases. Relative scientific literature along with the clinical experience of the faculty is stressed in justifying the rationale for diagnosis, treatment planning, and management. 1 cr, 1st, 2nd, 3rd, 4th, 5th and 6th sem.

EN 910, 911, 912 Clinical Endodontics

Clinical management of non-surgical and surgical endodontic cases. Special attention to development of diagnostic skills and clinical endodontic facility and to the application of a therapeutic approach formed in conjunction with other dental specialties. 12 cr, 1st and 2nd sem.; 12 cr, 3rd and 4th sem.; 16 cr, 5th and 6th sem.

EN 991, 992, 993 Research: Endodontics

Research in endodontics and related fields designed as a partial requirement for the MSD.
Selected preceptor. 6 cr, 1st and 2nd sem.; 6 cr, 3rd and 4th sem.; 8 cr, 5th and 6th sem.

Orthodontics and Dentofacial Orthopedics Program

Certificate of Advanced Graduate Study in Orthodontics and Dentofacial Orthopedics and Master of Science in Dentistry in Orthodontics and Dentofacial Orthopedics

The primary goal of the CAGS/MSD in Orthodontics and Dentofacial Orthopedics is to educate competent individuals to practice orthodontics and dentofacial orthopedics. The 36-month curriculum is arranged so that approximately half the time is devoted to clinical training. The remainder of the program is devoted to lectures and seminars in the basic sciences and clinical subjects related to orthodontics, as well as to the research project.

The intent of the program is to educate residents to become competent clinicians who can successfully analyze and treat dentofacial deformities. Emphasis is placed on craniofacial growth and development, cephalometrics, biomechanics, occlusion, and neuromuscular physiology.

Academic Requirements

Residents must successfully complete all required courses as outlined in this Orthodontics and Dentofacial Orthopedics Program Manual and must achieve all competencies and proficiencies. Failure to do so in any course will result in the resident's failing to earn his/her academic degree/certificate. Each postdoctoral program has a fixed curriculum and graduation is dependent on passing all courses in the curriculum, demonstrating clinical proficiency in the discipline and completing a research project, and writing and defending a thesis.

The Orthodontic training program begins the first working day after June 30 and runs until June 30, 36 months later, assuming completion of the requirements listed below.

The following is a list of requirements that must be completed before the certificate can be issued:

1. Successful completion of all course work and satisfying the clinical guidelines.
2. Records complete and up to date with signatures on all patients. Residents will not receive credit for finished cases that do not have the required signatures.
3. Final records completed on all finished cases (guideline = 40 cases).
4. All completed cases scored (excluding cases transferred and prematurely terminated) and final write-ups approved.
5. Seminar projects typed and handed in.
6. Research projects typed and handed in.
7. Satisfactory results of the Assessment Examination.
8. Satisfactory results from the bi-annual faculty evaluation.

Seminars

During the course of study, each resident will be responsible for preparing a variety of seminars. Each seminar will be assigned to residents who will review the literature and prepare reading

lists. Following the seminar, the resident who acts as moderator will be responsible to see that each section is typed, assembled and turned in to the Program Director.

Clinical Rotations

Residents will participate in clinical rotations in pediatric dentistry, oral surgery, anesthesia, and pediatric orthodontics. Residents are scheduled in the clinic five days a week (Sunday – Thursday) for a total of 40 hours. Classes are held either before clinic from 8 am-9 am or after clinic from 5:30 pm-7 pm.

Only those cases which have been properly typed, cost estimated, contracted, paid, and treated to the advisor's satisfaction will be accepted as completed clinical procedures.

Case Presentations

At selected times during the academic year the residents will be required to present case reports and patients records to his/her faculty advisor. These sessions will be utilized to assess resident progress, identify any problems or shortcomings, and institute remedial measures.

Research

Residents who are admitted to a Certificate of Advanced Graduate Studies (CAGS) will concomitantly pursue the Master of Science in Dentistry (MSD). The programs are combined clinical and research programs. Residents will have three years of clinical experience and three years to develop a research proposal, collect data and write and defend their thesis. In any one year, residents will spend approximately 1/3 of their time pursuing research and 2/3 of their time in clinical study and practice. On completion of the requirements, the MSD degree is awarded either in the same area as the CAGS or Dental Public Health. The MSD is not offered with the Advanced Education in General Dentistry program.

Candidates for the MSD degree are required to pass all assigned courses and demonstrate progress in their area of research throughout the three years of the program. The number of courses that may be transferred to an MSD program is explained in more detail in the Policy on Transfer of Courses and Course Exemption in the BUIDRE Policies and Procedures Manual. Core courses that will be required of all residents doing research are in epidemiology, biostatistics, and research writing. Additionally courses are planned by candidates in consultation with the research advisor and in accordance with the requirements of their major field. Coursework may be in formal courses, seminars, and research in proportion to the particular needs and backgrounds of the candidates as worked out in consultation with the research advisor. Requirements for the MSD include completing the core courses and a major research project and thesis of professional caliber under faculty supervision. The goal is for residents to develop the ability to evaluate the existing literature, focus, organize and analyze complex data to address an issue in a way that contributes to the literature.

The MSD degree entails a research project and thesis and is an integral component of the 36-month program. Depending on the time needed to complete the research component, additional

time beyond the 36 months may be necessary for successful completion of the MSD degree. Other coursework may be assigned at the discretion of the research advisor.

Thesis

A research thesis is required. Guidelines for thesis preparation will be provided to candidates by their program director. The thesis is to be based on a research project carried out by the candidate. The topic for a thesis will be chosen by the candidate in conjunction with the faculty advisor. The major areas of focus are clinical, epidemiological or public health research. In certain cases, field projects or systematic reviews with a meta-analysis of the literature may be acceptable.

Residents must initiate and complete a research project using the elements of scientific method, including research design, accurate reporting, critical thinking and the formulation of conclusions based upon scientific data rather than opinion. Collaboration with other hospitals, medical institutions and other health-orientated organizations is encouraged to foster collaborative research.

Residents will be assigned a research advisor within the CAGS Program with the approval of the appropriate clinical research or dental public health directors at Boston University. The resident must work closely with the research advisor to ensure satisfactory progress. The research protocol will be developed within the first 6 months of the program. Implementation and data collection will commence after Institutional Review Board approval (research ethics committee) approval (where appropriate) and other regulatory approvals. It is anticipated that data collection will be complete no later than 4 months before graduation to allow for data analysis, thesis preparation and defense of the thesis (optional depending on the program). Guidelines for Thesis Dissertation Submission are provided in the Resident Handbook, Appendix IV.

Competencies and Proficiencies

The goal of the advanced education program in orthodontics is to prepare a specialist who is proficient in providing all levels of orthodontic care for children, adolescents, and adults. The program fosters the development of an analytical approach necessary for private practice, research and teaching of orthodontics. The program educates residents, when required, to interface with practitioners in other disciplines in order to provide comprehensive care.

A graduate of the advanced orthodontic training program in orthodontics will be competent and proficient in:

1. Performing a thorough and accurate clinical examination:
 - a. Recognizing all types and classifications of malocclusions;
 - b. Evaluating the significance of oral habits and their relationships to presenting malocclusions;
 - c. Obtaining excellent orthodontic records, including, but not limited to:
 - i. Impressions
 - ii. Facial and intraoral photographs
 - iii. Cephalometric, panoramic x-rays

- d. Presenting treatment plans to parents and/or patients and obtaining an informed consent;
2. Developing comprehensive treatment plans:
 - a. Incorporating relevant medical and dental history;
 - b. Performing cephalometric analyses in order to analyze and dental and skeletal relationships;
 - c. Calculating space requirements;
 - d. Assessing anchorage needs;
 - e. Applying current principles of growth and development in order to realize the greatest potential for treatment;
3. Using a variety of techniques that treat diverse problems:
 - a. Understanding the advantages and disadvantages of various appliances for specific purposes;
 - b. Applying the mechanical and metallurgical properties of wires to effect specific types of tooth movement;
 - c. Utilizing extraoral and intraoral anchorage techniques;
 - d. Designing force systems to resolve asymmetric space requirements;
4. Performing an ongoing visit-to-visit evaluation of treatment:
 - a. Analyzing the changes occurring as a result of earlier mechanotherapy;
 - b. Adapting the treatment, when necessary, to adjust for changes brought about by previous treatment;
 - c. Anticipating the potential for unwanted sequelae;
5. Assessing and treating severe skeletodental deformities:
 - a. Understanding growth concepts associated with significant dentofacial abnormalities;
 - b. Evaluating and staging interdisciplinary problems involving orthodontics and orthognathic surgery;
 - c. Interacting with oral and maxillofacial surgeons in treatment planning and treatment;
6. Managing oral health needs of patients undergoing orthodontic treatment:
 - a. Recognizing early signs of periodontal disease;
 - b. Administering appropriate interceptive measures to arrest or reverse oral health problems;
7. Managing complex interdisciplinary problems:
 - a. Working closely with other specialists to plan and coordinate treatment;
 - b. Understanding the complexity of advanced periodontal disease as it pertains to orthodontic tooth movement;
 - c. Utilizing orthodontic techniques to establish dental relationships in preparation for restorative dentistry;
8. Diagnosing discrepancies in the developing dentition and utilizing effective limited treatment measures to correct or improve these problems;
9. Evaluating the current and past orthodontic literature:
 - a. Understanding the significance of scientific data to support or refute clinical observations and treatment;
10. Performing progress and final assessments of treatment:
 - a. Analyzing cephalometric data to identify skeletal, growth and dental changes;
 - b. Identifying criteria for successful outcomes;
 - c. Comparing and contrasting final outcomes with initial treatment goals and objectives.

Orthodontics and Dentofacial Orthopedics Curriculum

A word on Distance Education:

Most classes and all clinical and research activity will take place at BUIDRE facilities in Dubai. Some coursework will be presented electronically from Boston University School of Dental Medicine. Courses presented via distance education technology are indicated in the following course listings. In most cases these courses are intended to be viewed in a classroom setting with BUIDRE faculty present to stimulate discussion and answer questions. However, these courses will also be available on the internet for resident's independent review.

Please note that there is no required number of credits to graduate. Completing all coursework is required for graduation. Credits are assigned only for weighting courses for calculation of grade point average.

Interdisciplinary (IDC) courses are indicated below. IDC course descriptions can be found on page 76 of this catalog.

Year 1

OB 763 Basic Processes in Oral Biology 2 cr, 1st and 2nd sem. **(IDC, Distance Education BU)**

OR 803 Craniofacial Growth and Development 1 cr, 2nd sem.

OR 805 Orthodontic Seminar I 15 cr, 1st and 2nd sem.

- OR 805.1 Orientation to Orthodontics 2 cr, 1st sem.
- OR 805.2 Biomechanics 1 cr, 1st sem.
- OR 805.3 Diagnosis and Treatment Planning 4 cr, 1st and 2nd sem.
- OR 805.4 Scope of Orthodontics 5 cr, 1st and 2nd sem.

OR 822 Surgical Orthodontics 2 cr, 1st and 2nd sem.

OR 911 Orthodontic Clinical Practice 12 cr, 1st and 2nd sem.

OR 990 Research: Orthodontics 6 cr, 1st and 2nd sem.

OS 831 Head and Neck Anatomy 1 cr, 1st sem. **(IDC, Distance Education from BU)**

OS 761 Medical Concerns of the Dental patient 1 cr, 1st and 2nd sem. **(IDC)**

PE 764 Current Concepts in Periodontology 1 cr, 1st sem. **(IDC)**

PH 741 Behavioral Sciences 1 cr, 1st sem. **(IDC, Distance Education from BU)**

PH 763 Bioethics and Law 1 cr, 2nd sem. **(IDC, Distance Education from BU)**

PH 803 Biostatistics 1 cr, 1st and 2nd sem. **(IDC, Distance Education from BU)**

Year 2

OR 821 Orthodontic Seminar II 8 cr, 3rd and 4th sem.

- OR 821.1 Case Review 4 cr, 3rd and 4th sem.
- OR 821.2 Practice Alternatives after Graduation 1 cr, 3rd sem.
- OR 821.3 Practice Management 1 cr, 4th sem.
- OR 821.4 Non-Bracket Therapy 1 cr, 3rd and 4th sem.

OR 912 Orthodontic Clinical Practice 12 cr, 3rd and 4th sem.

OR 920 Seminar: Literature Review 6 cr, 3rd and 4th sem.

OR 991 Research: Orthodontics 6 cr, 3rd and 4th sem.
OS 866 Orthognathic Surgery 1 cr, 3rd and 4th sem.
PE 818 Seminar: Grand Rounds 2 cr, 3rd and 4th sem. **(IDC)**

Year 3

OR 821.5 Review American Board of Orthodontics Reading List 1cr, 6th sem.
OR 913 Orthodontic Clinical Practice 16 cr, 5th and 6th sem.
OR 921 Seminar: Literature Review 6 cr, 5th and 6th sem.
OR 992 Research: Orthodontics 8 cr, 5th and 6th sem.
PE 819 Seminar: Grand Rounds 2 cr, 5th and 6th sem. **(IDC)**

Orthodontics and Dentofacial Orthopedics Course Descriptions

OR 803 Craniofacial Growth and Development

Offers a clinically relevant understanding of craniofacial growth and development for the orthodontist. Topics include how malocclusion develops and how growth can be modified during treatment of malocclusion. Attention is focused on growth and development of the face, the occlusion and the dental arches, and biomechanical strategies used to facilitate optimal growth outcomes. 1 cr, 2nd sem.

OR 805 Orthodontic Seminar I

A four-part course for first-year residents comprising the following seminars: 15 cr, 1st and 2nd sem.

- **OR 805.1** Orientation to Orthodontics: Reading, PPT presentations and discussion for orientation. 2 cr, 1st sem.
- **OR 805.2** Biomechanics: Theories & principles of orthodontic biomechanics and dentofacial orthopedics. 1 cr, 1st sem.
- **OR 805.3** Diagnosis & Treatment Planning: Developing basic skills in orthodontic diagnosis & treatment planning.. 4 cr, 1st and 2nd sem.
- **OR 805.4** Scope of Orthodontics: Examination of the rationale for clinical orthodontics. 5 cr, 1st and 2nd sem.

OR 821 Orthodontic Seminar II

A five-part course for second-year residents comprising the following seminars: 8 cr, 3rd and 4th sem.

- **OR 821.1** Case Review: Developing proficient skills in diagnosis, treatment planning and case review. 4 cr, 3rd and 4th sem.
- **OR 821.2** Practice Alternatives after Graduation: Topics related to establishing a private orthodontic practice. 1 cr, 3rd sem.
- **OR 821.3** Practice Management: Topics related to the efficient management of a private orthodontic practice. 1 cr, 4th sem.
- **OR 821.4** Non-Bracket Therapy: Selecting cases, prescribing and administering Invisalign therapy. 1 cr, 3rd and 4th sem.
- **OR 821.5** Review American Board of Orthodontics Reading List 1cr, 6th sem.

OR 822 Surgical Orthodontics

Surgical orthodontic lectures and seminars discussing the diagnosis, treatment planning, and treatment of dentofacial deformities. Emphasis is on differentiating skeletal from dental malocclusion and the application of orthodontic and surgical strategies for the most efficacious surgical-orthodontic patient care. 2 cr, 1st and 2nd sem.

OR 911, 912, 913 Orthodontic Clinical Practice

Supervised clinical practice in orthodontics and in outpatient orthodontic clinic. 12 cr, 1st and 2nd sem; 12 cr, 3rd and 4th sem; 16 cr, 5th and 6th sem.

OR 920, 921 Seminar: Literature Review

A weekly seminar concentrating on critical evaluation of current and classical orthodontic literature. Provides residents with the foundation necessary to take the American Board of Orthodontics exam 6 cr, 3rd and 4th sem; 6 cr, 5th and 6th sem.

OR 990, 991, 992 Research: Orthodontics

Guided investigation of the field of orthodontics or its related preclinical sciences. 6 cr, 1st and 2nd sem; 6 cr, 3rd and 4th sem; 8 cr, 5th and 6th sem.

Pediatric Dentistry Program

Certificate of Advanced Graduate Study in Pediatric Dentistry and Master of Science in Dentistry in Pediatric Dentistry

Pediatric Dentistry is an age-defined specialty that provides both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs.

The Pediatric Dentistry Program offers a 36-month curriculum leading to a CAGS / MSD in Pediatric Dentistry.

The primary goal of the CAGS / MSD in pediatric dentistry is to prepare dentists to become specialists who are proficient in providing both primary and comprehensive preventive and therapeutic oral health care to infants and children through adolescence, including children with special health care needs. In addition, the curriculum is designed to prepare residents wishing to pursue a career in research or teaching in pediatric dentistry.

Academic Requirements

Residents must successfully complete all required courses as outlined in this Pediatric Dentistry Program Manual and must achieve all proficiencies. Failure to do so in any course will result in the resident failing to earn his/her academic degree/certificate. Each postdoctoral program has a fixed curriculum and graduation is dependent on passing all courses in the curriculum, demonstrating clinical proficiency in the discipline, completing a research project, and writing and defending a thesis.

Seminars

During the course of study, each resident will be responsible for preparing a variety of seminars. Each seminar will be assigned to residents who will review the literature and prepare reading lists. Following the seminar, the resident who acts as moderator will be responsible to see that each section is typed, assembled and turned in to the Program Director.

Clinical Rotations

Residents will participate in clinical rotations in pediatric dentistry, oral surgery, anesthesia, and pediatric orthodontics. Residents are scheduled in the clinic five days a week (Sunday – Thursday) for a total of 40 hours. Classes are held either before clinic from 8 am-9 am or after clinic from 5:30 pm-7 pm.

Only those cases which have been properly typed, cost estimated, contracted, paid, and treated to the advisor's satisfaction will be accepted as completed clinical procedures.

Case Presentations

At selected times during the academic year residents will be required to present case reports and patient records to his/her faculty advisor. These sessions will be utilized to assess resident progress, identify any problems or shortcomings, and institute remedial measures.

Research

Residents who are admitted to a Certificate of Advanced Graduate Studies (CAGS) will concomitantly pursue the Master of Science in Dentistry (MSD). The programs are combined clinical and research programs. Residents will have three years of clinical experience and three years to develop a research proposal, collect data and write and defend their thesis. In any one year, residents will spend approximately 1/3 of their time pursuing research and 2/3 of their time in clinical study and practice. On completion of the requirements, the MSD degree is awarded either in the same area as the CAGS or Dental Public Health. The MSD is not offered with the Advanced Education in General Dentistry program.

Candidates for the MSD degree are required to pass all assigned courses and demonstrate progress in their area of research throughout the three years of the program. The number of courses that may be transferred to an MSD program is explained in more detail in the Policy on Transfer of Courses and Course Exemption in the BUIDRE Policies and Procedures Manual. Core courses that will be required of all residents doing research are in epidemiology, biostatistics, and research writing. Additionally courses are planned by candidates in consultation with the research advisor and in accordance with the requirements of their major field. Coursework may be in formal courses, seminars, and research in proportion to the particular needs and backgrounds of the candidates as worked out in consultation with the research advisor. Requirements for the MSD include completing the core courses and a major research project and thesis of professional caliber under faculty supervision. The goal is for residents to develop the ability to evaluate the existing literature, focus, organize and analyze complex data to address an issue in a way that contributes to the literature.

The MSD degree entails a research project and thesis and is an integral component of the 36-month program. Depending on the time needed to complete the research component, additional time beyond the 36 months may be necessary for successful completion of the MSD degree. Other coursework may be assigned at the discretion of the research advisor.

Thesis

A research thesis is required. Guidelines for thesis preparation will be provided to candidates by their program director. The thesis is to be based on a research project carried out by the candidate. The topic for a thesis will be chosen by the candidate in conjunction with the faculty advisor. The major areas of focus are clinical, epidemiological or public health research. In certain cases, field projects or systematic reviews with a meta-analysis of the literature may be acceptable.

Residents must initiate and complete a research project using the elements of scientific method, including research design, accurate reporting, critical thinking and the formulation of conclusions based upon scientific data rather than opinion. Collaboration with other hospitals, medical institutions and other health-orientated organizations is encouraged to foster collaborative research.

Residents will be assigned a research advisor within the CAGS Program with the approval of the appropriate clinical research or dental public health directors at Boston University. The resident must work closely with the research advisor to ensure satisfactory progress. The research protocol will be developed within the first 6 months of the program. Implementation and data collection will commence after Institutional Review Board approval (research ethics committee) approval (where appropriate) and other regulatory approvals. It is anticipated that data collection will be complete no later than 4 months before graduation to allow for data analysis, thesis preparation and defense of the thesis (optional depending on the program). Guidelines for Thesis Dissertation Submission are provided in the Resident Handbook, Appendix IV.

Proficiencies

Residents are trained to provide services in institutional, private, or public health settings. The program encourages the development of a critical and inquiring attitude that is necessary for the advancement of practice, research and teaching in pediatric dentistry. The program educates future pediatric dentists to work in coordination with members of other health care and social disciplines.

A graduate of the CAGS / MSD Program in Pediatric Dentistry will be proficient in:

1. Working cooperatively with consultants and clinicians in other dental specialties and healthcare fields:
 - a. Recognizing when consultation with other clinician(s) is indicated and providing written referral(s) that include appropriate diagnostic material;
 - b. Participating in multidisciplinary care for patients with complex medical and/or dental needs;
2. Treating pediatric patients using non-pharmacological and pharmacological approaches consistent with approved guidelines for care:
 - a. Describing to parents in understandable terms various behavior management techniques;
 - b. Obtaining informed consent for the use of behavior management techniques including restraint and conscious sedation;
 - c. Performing a medical risk assessment;
 - d. Applying non-pharmacologic behavior management techniques effectively in an out-patient setting;
 - e. selecting appropriate drug(s) and dosages, including nitrous oxide and local anesthetic for individual patients undergoing conscious sedation;
 - f. Continuously monitoring and interpreting physiologic data during conscious sedation and prior to discharge;
 - g. Managing sedation-related and medical emergencies during simulations and drills;

3. Applying current scientific principles, techniques and treatment planning for the prevention of oral diseases:
 - a. Implementing dental health education programs, materials and personnel to assist in the delivery of preventive care;
4. Providing comprehensive restorative and prosthetic dental care for infants, children, adolescents and those with special health care needs:
 - a. Obtaining and interpreting a comprehensive dental and medical history;
 - b. Conducting a thorough and accurate clinical examination;
 - c. Obtaining and interpreting appropriate radiographic and other diagnostic material;
 - d. Interpreting findings from the history and clinical examination and formulating an appropriate treatment plan;
 - e. Discussing treatment plan options with parents and obtaining informed consent;
 - f. Safely and effectively administering local anesthetic to pediatric patients through adolescence and to those with special health care needs;
 - g. Providing consistently high quality restorative and prosthetic treatment;
5. Diagnosing and treating traumatic injuries of the oral and perioral structures:
 - a. Evaluating and treating trauma to the primary, mixed and permanent dentitions such as repositioning, replanting, stabilizing and restoring intruded, extruded, luxated and avulsed teeth to acceptable esthetic and functional status;
 - b. Evaluating, diagnosing and treating pulpal, periodontal and associated soft tissues following traumatic injury;
 - c. Recognizing orofacial injuries such as fractures of the maxilla and/or mandible and referring for treatment by an appropriate specialist;
 - d. Recognizing and reporting child abuse, neglect, and non-accidental trauma;
6. Diagnosing periodontal diseases in pediatric and adolescent patients, and either treating or referring the patient to the appropriate specialist;
7. Diagnosing and treating diseases of the pulpal and periradicular tissues in the primary and developing permanent dentition;
8. Managing the oral health of patients with special health care needs including those who are medically or physically compromised and those with developmental, psychiatric or psychological disorders:
 - a. Recognizing the significance of special health care needs in individual patients and implementing treatment plans that utilize the alternatives in the delivery of dental care that those conditions may require;
9. Diagnosing abnormalities in the developing dentition and treating those conditions which can be corrected or significantly improved by the early utilization of limited appliances;
10. Providing dental care in the operating room to patients while under general anesthesia:
 - a. Performing pre-operative workup and assessment including medical risk assessment related to general anesthesia;
 - b. Completing admitting procedures, operative consent, medical records, operative dictation and discharge orders;
 - c. Providing consistently high quality restorative procedures in the operating room;
 - d. Performing post-operative follow-up and implementing preventive plans;
11. Evaluating and managing dental issues in pediatric patients admitted to hospital:
 - a. Ordering and performing consultations in an in-patient setting;

- b. Obtaining and evaluating patient/family history, ordering radiographic and laboratory tests;
 - c. Writing patient management orders and completing medical records;
12. Assessing and managing orofacial trauma, dental pain and infections while on emergency services.

Pediatric Dentistry Curriculum

A word on Distance Education

Most classes and all clinical and research activity will take place at BUIDRE facilities in Dubai. Some coursework will be presented electronically from Boston University School of Dental Medicine. Courses presented via distance education technology are indicated in the following course listings. In most cases these courses are intended to be viewed in a classroom setting with BUIDRE faculty present to stimulate discussion and answer questions. However, these courses will also be available on the internet for resident's independent review.

Please note that there is no required number of credits to graduate. Completing all coursework is required for graduation. Credits are assigned only for weighting courses for calculation of grade point average.

Interdisciplinary (IDC) courses are indicated below. IDC course descriptions can be found on page 76 of this catalog.

Year I

OB 761 Oral Microbiology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
OB 767 Oral Immunology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
OB 830 Research Writing 1 cr, 1st sem. **(IDC, Distance Education from BU)**
OS 828 Pain and Anxiety Control 1 cr, 2nd sem. **(IDC)**
OS 831 Head and Neck Anatomy 1cr, 1st sem. **(IDC, Distance Education from BU)**
PA 801 Oral and Maxillofacial Pathology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
PD 802 Fundamentals of Pediatric Dentistry 2 cr, 1st sem.
PD 821 Advanced Seminar in Pediatric Dentistry 2 cr, 1st and 2nd sem.
PD 832 Growth and Development .5 cr, 1st sem. **(IDC)**
PD 911 Clinical Pediatric Dentistry 10 cr, 1st and 2nd sem.
PD 918 Clinical Anesthesia 1 cr, 2nd sem.
PD 922 Clinical Oral Surgery 1 cr, 1st sem.
PD 991 Research Pediatric Dentistry 6 cr, 1st and 2nd sem.
PE 827 Applied Dental Pharmacology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**
PH 741 Behavioral Sciences 1 cr, 1st sem. **(IDC, Distance Education from BU)**
PH 763 Bioethics and the Law 1 cr, 1st sem. **(IDC, Distance Education from BU)**
PH 803 Biostatistics 1 cr, 1st and 2nd sem. **(IDC, Distance Education from BU)**

Year II

PD 808 Orthodontics for Pediatric Dentists 1 cr, 3rd sem.
PD 822 Advanced Seminar in Pediatric Dentistry 2 cr, 3rd and 4th sem.
PD 912 Clinical Pediatric Dentistry 10 cr, 3rd and 4th sem.
PD 916 Clinical Orthodontics 4 cr, 3rd and 4th sem.
PD 920 Clinical Pediatric Medicine 2 cr, 3rd or 4th sem.
PD 992 Research Pediatric Dentistry 6 cr, 3rd and 4th sem.

PE 764 Current Concepts in Periodontology 1 cr, 3rd sem. **(IDC)**

PE 830 Clinical Applications of Oral Medicine and Oral Pathology 1 cr, 4th sem. **(IDC)**

PH 831 Presentation Skills 1 cr, 4th sem. **(IDC, Distance Education from BU)**

Year III

PD 823 Advanced Seminar in Pediatric Dentistry 2 cr, 5th and 6th sem.

PD 824 Advanced Case Presentations in Pediatric Dentistry 2 cr, 5th and 6th sem.

PD 913 Clinical Pediatric Dentistry 12 cr, 5th and 6th sem.

PD 917 Clinical Orthodontics 4 cr, 5th and 6th sem.

PD 993 Research Pediatric Dentistry 8 cr, 5th and 6th sem.

Pediatric Dentistry Course Descriptions

PD 802 Fundamentals of Pediatric Dentistry

Intensive lecture series covering the fundamental concepts of the practice of pediatric dentistry. The course is intended to familiarize the new resident with concepts that will be encountered in the various clinical settings. 2 cr, 1st sem.

PD 808 Orthodontics for Pediatric Dentists

Emphasis is placed on growth and development, cephalometrics, diagnosis and treatment planning and the evaluation of the normal and abnormal conditions in the primary, early mixed and late mixed dentitions. 1 cr, 3rd sem.

PD 821, 822, 823 Advanced Seminar in Pediatric Dentistry

A two-year, in-depth course of seminars that reviews the current literature related to Pediatric Dentistry. Residents from both the second and third year read assigned articles and abstract them for presentation in the seminar. 2 cr, 1st and 2nd sem; 2 cr, 3rd and 4th sem; 2 cr, 5th and 6th sem.

PD 824 Advanced Case Presentations in Pediatric Dentistry

The purpose of the course is to introduce the resident to the discipline of case workup, analysis, and presentation. During the third year of the program, three cases must be documented, analyzed and presented. In addition, three cases that represent the resident's best work in various treatment categories must be documented and presented. 2 cr, 5th and 6th sem.

PD 911, 912, 913 Clinical Pediatric Dentistry

During the first year of the program, residents are closely supervised while developing skills in diagnosis, radiographic technique, treatment planning, preventive and restorative dentistry, space management, trauma management, and nonpharmacologic behavior management. During the second year, residents learn to manage children with complex special health care needs, including inpatients. Residents interact and coordinate with other medical departments within the hospitals, and with outside clinics and practitioners. They utilize pharmacologic behavior management techniques for children, including those with special health care needs. 10 cr, 1st and 2nd sem; 10 cr, 3rd and 4th sem; 12 cr, 5th and 6th sem.

PD 916, 917 Clinical Orthodontics

Residents develop clinical expertise through practical application of orthodontic principles developed in lectures and seminars. 4 cr, 3rd and 4th sem; 4 cr, 5th and 6th sem.

PD 918 Clinical Anesthesia

This course introduces the resident to the basic principles of general anesthesia with particular emphasis on pre and postoperative evaluation of the surgical patient. The resident participates in the administration of general anesthesia to dental and medical surgical cases. 1 cr, 2nd sem.

PD 920 Clinical Pediatric Medicine

The goal of this month-long rotation in clinical pediatrics is to expose the resident to the practice of pediatric medicine. The specific objectives are to gain an understanding of: obtaining and evaluating complete medical histories, parental interviews, system orientated physical

examinations, clinical assessment of healthy and ill patients, selection of laboratory tests and evaluation of data, evaluation of physical, motor and sensory development, genetic implications of childhood diseases, the use of drug therapy in the management of diseases, and parental management through discussions and explanations. 2 cr, 3rd or 4th sem.

PD 922 Clinical Oral Surgery

The goal of the month-long rotation in clinical oral surgery is to offer sufficient clinical experience to enable the resident to achieve competency in the assessment and management of orofacial trauma, infections, and dental pain. During the rotation each resident participates in the emergency room at Rashid Hospital on an "on call" basis. 1 cr, 1st sem.

PD 991, 992, 993 Research in Pediatric Dentistry

The application of research methods and the evaluation of investigative data develop intellect, a creative attitude, improved interpretation of scientific literature and a desire for continued study. 6 cr, 1st and 2nd sem; 6 cr, 3rd and 4th sem; 8 cr, 5th and 6th sem.

Periodontology Program

Certificate of Advanced Graduate Study in Periodontology and Master of Science in Dentistry in Periodontology

The 36-month CAGS/MSD program emphasizes the sciences essential to understanding the principles of clinical periodontology as well as the clinical skills of advanced periodontal therapy. The first year includes the basic didactic courses: clinical medical sciences, microbiology/immunology, periodontology, principles of occlusion, orthodontics, oral medicine, oral pathology, and oral biology. In addition, there is a 50% time commitment to the clinical practice of periodontics. The second and third year are devoted to the clinical practice of this specialty, with additional instruction in the clinical sciences and clinical research.

The MSD degree entails a research project and thesis and is an integral component of the 36-month program. Depending on the time needed to complete the research component, additional time beyond the 36 months may be necessary for successful completion of the MSD degree.

Other coursework may be assigned at the discretion of the research advisor.

Academic Requirements

Residents must successfully complete all required courses as outlined in this Periodontology Program Manual and must achieve all competencies and proficiencies. Failure to do so in any course will result in the resident's failing to earn his/her academic degree/certificate. Each postdoctoral program has a fixed curriculum and graduation is dependent on passing all courses in the curriculum, demonstrating clinical proficiency in the discipline and completing a research project, and writing and defending a thesis.

Didactic

1. Successful completion of all required courses. Criteria for satisfactory completion are published in the course curricular outlines under "Resident Evaluation".
2. Successful completion of all seminar programs.
3. Attend all lectures, seminars, and clinic sessions.
4. Successful completion of all preclinical laboratories/clinics according to the published guidelines for each course.
5. Successful completion of the In Service Exam and Mock Boards.

Seminars

During the course of study each resident will be responsible for preparing a variety of seminars. Each seminar will be assigned to residents who will review the literature and prepare reading lists. Following the seminar, the resident who acts as moderator will be responsible to see that each section is typed, assembled and turned in to the Program Director.

Clinic

Residents will participate in clinical rotations in pediatric dentistry, oral surgery, anesthesia, and pediatric orthodontics. Classes are held either before clinic from 8 am-9 am or after clinic from 5:30 pm-7 pm. Clinics will be open 5 days a week (Sunday-Thursday) from 9AM- 5PM and available to residents for patient treatment depending upon class schedules.

Only those cases which have been properly typed, cost estimated, contracted, paid, and treated to the advisor's satisfaction will be accepted as completed clinical procedures.

1. As put forth by the Program Director in accordance with the American Association of Periodontology, each periodontal resident must successfully complete and document a minimum of 15 comprehensive cases and case reports of varying degrees of difficulty.
2. The goal of the clinical experience is to gain proficiency in clinical periodontics. To that end, it is recommended that residents set a goal of 200 isolated procedure cases to ensure adequate clinical exposures to a variety of procedures. Proficiency in specific procedures will be evaluated by the faculty in accordance with the outcomes assessment plan.
3. If, based upon faculty evaluation, a resident is considered deficient in any aspect of Clinical Periodontology, their program will be extended. The length of time and type of remediation required will be decided by the Chairperson and the Director of Clinical Periodontology after consultation with clinical faculty.

Case Presentations

At selected times during the academic year residents will be required to present case reports and patient records to his/her faculty advisor. These sessions will be utilized to assess resident progress, identify any problems or shortcomings, and institute remedial measures.

Only those cases which have been properly typed, cost estimated, contracted, paid, and treated to the program director's satisfaction will be accepted as completed clinical procedures.

Research

Residents who are admitted to a Certificate of Advanced Graduate Studies (CAGS) will concomitantly pursue the Master of Science in Dentistry (MSD). The programs are combined clinical and research programs. Residents will have three years of clinical experience and three years to develop a research proposal, collect data and write and defend their thesis. In any one year, residents will spend approximately 1/3 of their time pursuing research and 2/3 of their time in clinical study and practice. On completion of the requirements, the MSD degree is awarded either in the same area as the CAGS or Dental Public Health. The MSD is not offered with the Advanced Education in General Dentistry program.

Candidates for the MSD degree are required to pass all assigned courses and demonstrate progress in their area of research throughout the three years of the program. The number of courses that may be transferred to an MSD program is explained in more detail in the Policy on Transfer of Courses and Course Exemption in the BUIDRE Policies and Procedures Manual.

Core courses that will be required of all residents doing research are in epidemiology, biostatistics, and research writing. Additionally courses are planned by candidates in consultation with the research advisor and in accordance with the requirements of their major field. Coursework may be in formal courses, seminars, and research in proportion to the particular needs and backgrounds of the candidates as worked out in consultation with the research advisor. Requirements for the MSD include completing the core courses and a major research project and thesis of professional caliber under faculty supervision. The goal is for residents to develop the ability to evaluate the existing literature, focus, organize and analyze complex data to address an issue in a way that contributes to the literature.

The MSD degree entails a research project and thesis and is an integral component of the 36-month program. Depending on the time needed to complete the research component, additional time beyond the 36 months may be necessary for successful completion of the MSD degree. Other coursework may be assigned at the discretion of the research advisor.

Thesis

A research thesis is required. Guidelines for thesis preparation will be provided to candidates by their program director. The thesis is to be based on a research project carried out by the candidate. The topic for a thesis will be chosen by the candidate in conjunction with the faculty advisor. The major areas of focus are clinical, epidemiological or public health research. In certain cases, field projects or systematic reviews with a meta-analysis of the literature may be acceptable.

Residents must initiate and complete a research project using the elements of scientific method, including research design, accurate reporting, critical thinking and the formulation of conclusions based upon scientific data rather than opinion. Collaboration with other hospitals, medical institutions and other health-orientated organizations is encouraged to foster collaborative research.

Residents will be assigned a research advisor within the CAGS Program with the approval of the appropriate clinical research or dental public health directors at Boston University. The resident must work closely with the research advisor to ensure satisfactory progress. The research protocol will be developed within the first 6 months of the program. Implementation and data collection will commence after Institutional Review Board approval (research ethics committee) approval (where appropriate) and other regulatory approvals. It is anticipated that data collection will be complete no later than 4 months before graduation to allow for data analysis, thesis preparation and defense of the thesis (optional depending on the program). Guidelines for Thesis Dissertation Submission are provided in the Resident Handbook, Appendix IV.

Competencies and Proficiencies

In order to graduate from the Periodontology Program, each resident must demonstrate competency and proficiency in the diagnosis, treatment planning and treatment of a wide range of periodontology patients with various categories of need, defined by the following competency and proficiency statements. A competent and proficient Periodontist refers to an individual with

the knowledge, skills and values to independently and consistently perform quality periodontic care.

A graduate of the advanced training program in Periodontics will be competent in the following areas:

1. Residents must be competent in the treatment of medically compromised and/or geriatric patients.
2. Residents must be competent in the management of non-plaque related periodontal disease and disorders of the periodontium.
3. Residents must be competent in the surgical site preparation and the placement of dental implants as well as the management of the peri-implant tissues.

A graduate of the advanced training program in Periodontics will be proficient in the following areas:

1. Residents will be proficient in collecting, organizing, analyzing and interpreting radiographic and non radiographic data as they relate to periodontal diseases and dental implants. They will be proficient in formulating a diagnosis and prognosis.
2. Residents will be proficient in understanding and discussing a rationale for the indicated therapy, developing a comprehensive treatment plan and communicating to patients the nature of their periodontal health status and treatment needs.
3. Residents will be proficient in critically evaluating the results of therapy: organizing, developing, implementing and evaluating periodontal disease control programs as well as recall/maintenance programs for their patients.
4. Residents will be proficient in effectively communicating with dental and other health care professionals, interpreting their advice and integrating this information into the treatment of the patient.
5. Residents will be proficient in effectively utilizing allied dental personnel and in organizing, developing and implementing an infection control program for a dental practice setting.
6. Residents will be proficient in scaling and root planing as well as non surgical treatment of periodontal diseases (chemotherapeutics, local, topical and systemic medications).
7. Residents will be proficient in periodontal resective surgery procedures (gingivectomy/gingivoplasty, flap procedures, ostectomy/osteoplasty, root resection, extractions).
8. Residents will be proficient in periodontal regenerative therapies to include bone or bone substitute grafts and guided tissue regeneration.
9. Residents will be proficient in occlusal treatment to include occlusal adjustment/selective grinding; stabilization /splinting, including bite-guard therapy.
10. Residents will be proficient in the management of endodontic-periodontal lesions; treatment should be provided in consultation with the individuals who will assume the responsibility for the completion or supervision of endodontics therapy.
11. Residents will be proficient in functional and esthetic periodontal procedures to include: gingival augmentation/ridge augmentation, gingival, connective tissue and pedicle grafts.
12. Residents will be proficient in more than one method of conscious sedation.

Periodontology Curriculum

Most classes and all clinical and research activity will take place at the BUIDRE facilities in Dubai. Some coursework will be presented electronically from Boston University School of Dental Medicine. Courses presented via distance education technology are indicated in the following course listings. In most cases these courses are intended to be viewed in a classroom setting with BUIDRE faculty present to stimulate discussion and answer questions. However, these courses will also be available on the internet for resident's independent review.

Please note that there is no required number of credits to graduate. Completing all coursework is required for graduation. Credits are assigned only for weighting courses for calculation of grade point average.

Interdisciplinary (IDC) courses are indicated below. IDC course descriptions can be found on page 76 of this catalog.

Year I

- PD 832 Growth and Development .5 cr, 1st sem. **(IDC)**
- PE 801 Histology/Embryology: Clinical Relevance in Diagnosis and Therapy of Periodontal Disease .5 cr, 2nd sem.
- PE 802 Periodontology II 1cr, 1st and 2nd sem.
- PE 808 Seminar: Treatment Planning in Periodontics 2 cr, 1st and 2nd sem.
- PE 816 Periodontal Literature Review I 4 cr, 1st and 2nd sem.
- PE 817 Seminar: Grand Rounds 2 cr, 1st and 2nd sem. **(IDC)**
- PE 823 Periodontal Therapy I 4 cr, 1st and 2nd sem.
- PE 825 Orthomechanotherapy 2 cr, 2nd sem.
- PE 880 Seminar: Integration of Periodontology: Restorative and Implant Therapy I 1 cr, 1st and 2nd sem. **(IDC)**
- PE 911 Clinical Periodontology 12 cr, 1st and 2nd sem.
- PE 991 Research: Periodontology 6 cr, 1st and 2nd sem.
- PH 800 Introduction to Biostatistics/Epidemiology 1 cr, 1st sem. **(IDC, Distance Ed. from BU)**

Year II

- OB 761 Oral Microbiology 1 cr, 3rd sem. **(IDC, Distance Education from BU)**
- OB 763 Basic Processes in Oral Biology 2 cr, 3rd and 4th sem. **(IDC, Distance Ed. from BU)**
- OB 767 Oral Immunology 1 cr, 4th sem. **(IDC, Distance Education from BU)**
- OS 761 Medical Concerns of the Dental Patient 1 cr, 3rd and 4th sem. **(IDC)**
- OS 828 Pain and Anxiety Control 1 cr, 4th sem. **(IDC)**
- OS 831 Head and Neck Anatomy 1 cr, 3rd sem. **(IDC, Distance Education from BU)**
- PA 801 Oral and Maxillofacial Pathology 1 cr, 4th sem. **(IDC, Distance Education from BU)**
- PE 809 Seminar: Treatment Planning in Periodontics 2 cr, 3rd and 4th sem.
- PE 818 Seminar: Grand Rounds 2 cr, 3rd and 4th sem. **(IDC)**

PE 827 Applied Dental Pharmacology 1 cr, 4th sem. **(IDC, Distance Education from BU)**

PE 830 Clinical Applications of Oral Medicine and Oral Pathology 1 cr, 4th sem. **(IDC)**

PE 912 Clinical Periodontology 14 cr, 3rd and 4th sem.

PE 992 Research: Periodontology 6 cr, 3rd and 4th sem.

PH 741 Behavioral Sciences 1 cr, 3rd sem. **(IDC, Distance Education from BU)**

PH 763 Bioethics and Law 1 cr, 4th sem. **(IDC, Distance Education from BU)**

PR 761 Occlusion 1 cr, 3rd sem. **(IDC)**

PR 816 Seminar: Implantology 1 cr, 4th sem.

PR 844 Implantology Literature Review 1 cr, 3rd and 4th sem. **(IDC)**

PR 845 Implantology Topics 1 cr, 3rd and 4th sem. **(IDC)**

PR 846 Implantology Case Presentation 1 cr, 3rd and 4th sem. **(IDC)**

Year III

PE 810 Seminar: Treatment Planning in Periodontics 2 cr, 5th and 6th sem.

PE 819 Seminar: Grand Rounds 2 cr, 5th and 6th sem. **(IDC)**

PE 829 Periodontal Literature Review II 4 cr, 5th and 6th sem.

PE 913 Clinical Periodontology 14 cr, 5th and 6th sem.

PE 993 Research: Periodontology 8 cr, 5th and 6th sem.

PR 832 Temporomandibular Disorders and Orofacial Pain 1 cr, 6th sem.

PR 847 Implantology Case Presentation 1 cr, 5th and 6th sem. **(IDC)**

Periodontology Course Descriptions

PE 801 Histology/Embryology: Clinical Relevance in Diagnosis & Therapy of Perio Disease

Histology, embryology, molecular biology and physiology plus basic knowledge of periodontal disease and surgical techniques will be discussed. Treatment options will be analyzed in terms of anatomic limitations and flexibility of tissue components. .5cr, 2nd sem.

PE 802 Periodontology II

This course focuses on periodontal microsurgery, periodontally accelerated osteogenic orthodontics and alveolar distraction osteogenesis 1cr, 1st and 2nd sem.

PE 808, 809, 810 Seminar: Treatment Planning in Periodontics

Weekly case presentations followed by discussion of various alternatives of periodontal therapy and integrated dental disciplines. 2 cr, 1st and 2nd sem; 2 cr, 3rd and 4th sem; 2 cr, 5th and 6th sem.

PE 816 Periodontal Literature Review I

Weekly seminar focusing on extensive reading and critical evaluation of classic and current periodontal literature. Provides the resident with the background necessary to develop and defend rationales for therapy. For first-year residents. 4 cr, 1st and 2nd sem.

PE 823 Periodontal Therapy I

An introduction to the rationale for and objectives of periodontal therapy. Weekly lectures cover

data collection, treatment planning, and the role of initial therapy in periodontal treatment. For first-year residents. 4 cr, 1st and 2nd sem.

PE 825 Orthomechanotherapy

Presentation of diagnostic and treatment planning skills necessary for the management of localized malocclusions and focusing on orthodontic problems that can be managed by the periodontist. 2 cr. 2nd sem.

PE 829 Periodontal Literature Review II

A weekly seminar going over the most recent articles from the main periodontology journals. This is part of the resident's preparation for the in-service examination and the American Board of Periodontology exam. For second-year residents. 4 cr, 5th and 6th sem.

PE 911, 912, 913 Clinical Periodontology

Clinical periodontal practice emphasizing the elements of case documentation, patient evaluation and examination, diagnosis, prognosis, and treatment planning. Complete periodontal therapy performed under staff guidance. 12 cr, 1st and 2nd sem; 14 cr, 3rd and 4th sem; 14 cr, 5th and 6th sem.

PE 991, 992, 993 Research: Periodontology

Research in periodontology or its related preclinical sciences. Partially satisfies requirements for the Master of Science in Dentistry. 6 cr, 1st and 2nd sem; 6 cr, 3rd and 4th sem; 8 cr, 5th and 6th sem.

Prosthodontic Program

Academic Requirements

Each postdoctoral program has a fixed curriculum and graduation is dependent on passing all courses in the curriculum, demonstrating clinical proficiency in the specialty, completing a research project, writing and defending a thesis. Failure to do so in any course will result in the resident's failing to earn the academic degree or certificate.

Seminars

During the course of study, residents will participate in literature review seminars, patient presentation seminars and grand rounds seminars.

Formal Didactic Courses

The program includes a number of departmental courses in prosthodontics as well as biomedical sciences courses (interdisciplinary courses).

Clinical Education and Training

Residents will spend approximately 60 % of their time during the three-year program treating patients under faculty supervision or performing laboratory procedures for patients.

Patient Presentations

At selected times, the residents will be required to present formal (Power Point) patient presentations. At the completion of the program, each resident will give a final presentation including five patients with completed treatment.

Research

Residents who are admitted to a CAGS program will concomitantly pursue the MSD degree. The programs are combined clinical and research programs. The MSD degree entails a research project and thesis and is an integral component of the 36-month program. Depending on the time needed to complete the research component, additional time beyond the 36 months may be necessary for successful completion of the MSD degree. Other coursework may be assigned at the discretion of the research advisor.

Thesis

A research thesis is required. The thesis is to be based on a research project conducted by the candidate. The topic for a thesis will be chosen by the candidate in conjunction with the faculty advisor.

Residents must initiate and complete a research project using the elements of scientific method, including research design, accurate reporting, critical thinking and the formulation of conclusions based on scientific data rather than opinion. Collaboration with other hospitals, medical institutions and other health-orientated organizations is encouraged to foster collaborative research.

Residents will be assigned a research advisor within the CAGS program with the approval of the Senior Research Mentor, Dr. Harold Goodis. The resident must work closely with the research advisor to ensure satisfactory progress. The research protocol will be developed within the first year of the program. Implementation and data collection will commence after Institutional Review Board approval (research ethics committee) approval (where appropriate) and other regulatory approvals. It is anticipated that data collection will be completed by the end of the second year to allow for data analysis, thesis preparation and defense of the thesis. Guidelines for Thesis Submission are provided in the Resident Handbook, Appendix IV.

Prosthodontic Curriculum

A word on Distance Education

Most classes and all clinical and research activity will take place at the BUIDRE facilities in Dubai. Some coursework will be presented electronically from Boston University School of Dental Medicine in Boston. Courses presented via distance education technology are indicated in the following course listings. These courses are intended to be viewed in a classroom setting with BUIDRE faculty present to stimulate discussion and answer questions. However, these courses will also be available on the Internet for resident's independent review.

Please note that there is no required number of credits to graduate. Completing all coursework is required for graduation. Credits are assigned only for weighting courses for calculation of a grade point average.

Interdisciplinary courses are indicated below as **(IDC)**. IDC course descriptions can be found on page 18 of this manual.

Year 1

EN 819 Endodontics for Prosthodontists .5 cr, 2nd sem. **(IDC)**

OB 761 Oral Microbiology 0.7 cr, 2nd sem. **(IDC, Distance Education from BU)**

OB 767 Oral Immunology 1 cr, 2nd sem. **(IDC, Distance Education from BU)**

OS 761 Medical Concerns of the Dental Patient 1.7 cr (total), 0.8 cr 1st sem. and 0.9 cr 2nd sem. **(IDC)**

OS 828 Pain and Anxiety Control 0.9 cr, 2nd sem. **(IDC)**

OS 831 Head and Neck Anatomy 0.9 cr, 1st sem. **(IDC, Distance Education from BU)**

PD 832 Growth and Development 0.4 cr, 1st sem. **(IDC)**

PE 764 Current Concepts in Periodontology 0.7 cr, 1st sem. **(IDC)**

PE 817 Seminar: Grand Rounds 1 cr (total), 0.5 cr 1st sem. and 0.5 cr 2nd sem. **(IDC)**

PE 827 Applied Dental Pharmacology 0.6 cr, 2nd sem. **(IDC, Distance Education from BU)**

PH 741 Behavioral Sciences 0.4 cr, 1st sem. **(IDC, Distance Education from BU)**

PH 763 Bioethics and Law 0.5 cr, 2nd sem. **(IDC, Distance Education from BU combined with local lectures on local laws and customs)**

PR 801 Fixed Prosthodontics 2 cr (total), 0.7 1st sem. and 1.3 2nd sem.

PR 803 Complete Denture Prosthodontics 1.6 cr, 0.7 1st sem. and 0.9 2nd sem.

PR 806 Removable Partial Dentures 2 cr (total), 0.7 1st sem. and 1.3 2nd sem.

PR 807 Seminar: Patient Presentation and Treatment Planning 0.7 cr (total), 0.3 cr 1st sem. and 0.4 cr 2nd sem.

PR 815 Basic Prosthodontic Techniques 6.9 cr (total), 4.7 cr summer session (July-August) and 2.2 cr 1st sem. (September).

PR 844 Implantology Literature Review 1.9 cr (total), 0.9 cr 1st sem. and 1 cr 2nd sem. **(IDC)**

PR 846 Implantology Case Presentation 0.2 cr (total), 0.1 cr 1st sem. and 0.1 cr 2nd sem. **(IDC)**

PR 855 Principles of Surgery for Prosthodontists 0.2 cr, 2nd sem.

PR 861 Contemporary Prosthodontic Literature 1.1 cr (total), 0.3 cr 1st sem. and 0.8 2nd sem.

PR 911 Clinical Prosthodontics 10.5 cr (total), 5 cr 1st sem. and 5.5 cr 2nd sem.

PR 991 Research Prosthodontics 2.5 cr (total), 1 cr 1st sem. and 1.5 cr 2nd sem.

Year 2

PA 801 Oral and Maxillofacial Pathology 2.3 cr, 4th sem. **(IDC, Distance Education from BU)**

PH 800 Introduction to Biostatistics/Epidemiology 0.7 cr, 3rd sem. **(IDC, Distance Education from BU)**

PR 821 Maxillofacial Prosthetics 0.9 cr, 3rd sem.

OB 830 Research Writing 0.9 cr, 3rd sem. **(IDC, Distance Education from BU)**

PR 720 Practice Management 0.7 cr, 4th sem.

PR 825 Postdoctoral Biomaterials 1.9 cr (total), 0.7 cr 1st sem. and 1.1 cr 2nd sem. **(IDC)**

PE 818 Seminar: Grand Rounds 1 cr (total), 0.5 cr 3rd and 0.5 cr 4th sem. **(IDC)**

PR 761 Occlusion 1.1 cr, 4th sem. **(IDC)**

PR 808 Seminar: Patient Presentation and Treatment Planning 0.7 cr (total), 0.3 cr 3rd and 0.4 cr 4th sem.

PR 832 Temporomandibular Disorders and Orofacial Pain 0.7 cr, 4th sem. **(IDC)**

PR 847 Implantology Case Presentation 0.2 cr (total), 0.1 cr 3rd sem. and 0.1 cr 4th sem. **(IDC)**

PR 862 Contemporary Prosthodontic Literature 1.1 cr (total), 0.3 cr 3rd sem. and 0.8 4th sem.

PR 901 Prosthodontic Literature Review 2 cr (total), 1 cr 3rd sem. and 1 cr 4th sem.

PR 912 Clinical Prosthodontics 22.1 cr (total). 8.8 cr summer session (July-August), 6.8 cr 3rd sem. and 6.5 cr 4th sem.

PR 992 Research Prosthodontics 2.4 cr (total), 1.2 cr 3rd sem. and 1.2 4th sem.

PH 803 Biostatistics 4 cr (total), 1.7 4th sem. and 2.3 5th sem. (Year 3). **(IDC, Distance Education from BU)**

Year 3

PE 819 Seminar: Grand Rounds 1 cr (total), 0.5 cr 4th and 0.5 cr 5th sem. **(IDC)**
PE 880 Seminar: Integration of Periodontology, Restorative and Implant Therapy 0.3 cr (total), 0.1 cr 5th sem. and 0.2 6th sem. **(IDC)**
PR 809 Seminar: Patient Presentation and Treatment Planning 0.7 cr (total), 0.3 cr 5th and 0.4 cr 6th sem.
PR 848 Implantology Case Presentation 0.2 cr (total), 0.1 cr 5th sem. and 0.1 cr 6th sem. **(IDC)**
PR 863 Contemporary Prosthodontic Literature 1.1 cr (total), 0.3 cr 5th sem. and 0.8 6th sem.
PR 913 Clinical Prosthodontics 22.1 (total) cr, 8.8 cr summer session (July-August), 6.8 cr 5th sem. and 6.5 cr 6th sem.
PR 918 Student Teaching 1.2 cr, (July-Aug)
PR 993 Research Prosthodontics 2.7 cr (total), 1.2 cr 5th sem. and 1.5 6th sem.

Prosthodontic Course Descriptions

PR 720 Practice Management

This course reviews fundamental principles of managing a successful practice with special emphasis on record keeping and risk management. 0.7 cr, 4th sem.

PR 801 Fixed Prosthodontics

This advanced-level course reviews all aspects of fixed prosthodontic therapy with special emphasis on contemporary materials and techniques and the principles of occlusion as they relate to fixed prosthodontic. 2 cr, 1st and 2nd sem.

PR 803 Complete Denture Prosthodontics

This course comprehensively reviews contemporary principles and techniques used for the restoration of totally edentulous jaws with complete dentures, including implant-supported overdentures. 1.6 cr, 1st and 2nd sem.

PR 806 Removable Partial Dentures

Advanced-level course related to the treatment of partially edentulous patients with removable partial dentures. Emphasis is placed on diagnosis, treatment planning, and methods of stress control. 2 cr, 1st and 2nd sem.

PR 807, 808, 809 Seminar: Patient Presentation and Treatment Planning

A series of seminars on diagnosis and treatment planning for patients with complex prosthodontic needs. Residents develop expertise in comprehensive treatment planning along with the development of presentation skills. 1.2 cr, 1st and 2nd sem.; 1.2 cr, 3rd and 4th sem.; 1.2 cr, 5th and 6th sem.

PR 815 Basic Prosthodontic Techniques

Laboratory course in which residents participate in preclinical prosthodontic techniques and concepts, as well as advanced laboratory techniques. 6.9 cr, summer session and 1st sem.

PR 821 Maxillofacial Prosthetics

A comprehensive didactic program focusing on all aspects of the rehabilitation of patients with congenital and acquired maxillofacial defects. 0.9 cr, 3rd sem.

PR 861, 862, 863 Contemporary Prosthodontic Literature

This course introduces residents to recent prosthodontic literature and familiarizes them with a variety of primary prosthodontic journals as well as secondary and tertiary journals. Various levels of scientific power within the literature will be investigated to highlight the depth, breadth, and complexity of this relevant body of knowledge. This course is designed to foster among the residents an attitude of “life-long learning” through regular, disciplined reading of the literature. 1.1 cr, 1st and 2nd sem.; 1.1 cr, 3rd and 4th sem.; 1.1 cr, 5th and 6th sem.

PR 855 Principles of Surgery for Prosthodontists

The purpose of this course is to provide prosthodontic residents with didactic and hands-on instruction in basic surgical principles and techniques to prepare the residents for surgical placement of implants in selected patients. 0.2 cr, 3rd sem.

PR 901 Prosthodontic Literature Review

Recent and classical prosthodontic literature as a basis for substantive discussion of concepts in therapy and research. Special emphasis is placed on the principles of evidence-based health care and critical review of the dental literature. 2 cr, 3rd and 4th sem.

PR 911, 912, 913 Clinical Prosthodontics

Advanced clinical experiences in all phases of complex fixed, removable, and implant prosthodontics under direct supervision of the prosthodontic faculty. 10.5 cr, 1st and 2nd sem.; 22.1 cr, 3rd and 4th sem.; 22.1 cr, 5th and 6th sem.

PR 918 Student Teaching

Residents have the opportunity to synthesize their knowledge and experience through involvement with limited, supervised teaching assignments. During these assignments, residents act as teaching assistants. 1 cr 5th sem.

PR 991, 992, 993 Research Prosthodontics

Approved investigative effort to satisfy requirements for the MSD degree. Research may involve preclinical and clinical subjects related to prosthodontics or restorative dentistry. Residents must complete a research project, thesis and thesis defense to fulfill the requirements of this course. 2.5 cr, 1st and 2nd, 2.4 cr 3rd and 4th, 2.7 cr 5th and 6th sem.

Interdisciplinary Courses (IDC)

OB 761 Oral Microbiology

Distribution, ecology and pathogenic potential of oral microbiota. Pathogenicity of components of bacterial plaque and their role on the development of oral diseases. Mechanisms of local and systemic resistance to pathogenic oral microbiota. 0.7 cr, 2nd sem. **(IDC, Distance Education from BU)**

OB 767 Oral Immunology

Defense mechanisms that the host utilizes against exogenous matter. Although the immune system is protective, there is also a destructive aspect that affects most tissues. The course

examines these seemingly divergent mechanisms. 1 cr, 2nd sem. **(IDC, Distance Education from BU)**

OB 830 Research Writing

Identifies and defines the components and uses of a research protocol, the underlying research methodology and data, and the construction of a prudent work schedule essential to complete a research project. Includes the development of a protocol based on the resident's thesis topic. 1 cr, 3rd sem. **(IDC, Distance Education from BU)**

OS 761 Medical Concerns of the Dental Patient

A review of internal medicine and the management of the medically compromised dental patient. 1.7 cr, 1st and 2nd sem. **(IDC, Distance Education from BU)**

OS 828 Pain and Anxiety Control

A discussion of topics in pain and anxiety control, including pain physiology, local anesthetic techniques, patient management, and sedative techniques. 0.9 cr, 2nd sem. **(IDC)**

OS 831 Head and Neck Anatomy

An in-depth discussion of head and neck anatomy, emphasizing implications of head and neck anatomy to clinical dentistry. 0.9 cr, 1st sem. **(IDC, Distance Education from BU)**

PA 801 Oral and Maxillofacial Pathology

A course for postdoctoral residents in the dental specialty programs covering a spectrum of diseases involving the oral and paraoral structures. Lectures will include fibro-osseous lesions, developmental disturbances affecting the jaws and teeth, odontogenic tumors, cysts of the oral and paraoral region, bacterial, viral and mycotic infections, benign tumors and tumor-like lesions, white lesions, pigmented lesions, vesicullo-bullous diseases, hematologic, endocrine, and metabolic disorders. 2.3 cr, 4th sem. **(IDC, Distance Education from BU)**

PD 832 Growth and Development

This course offers a clinically relevant understanding of craniofacial growth and development for the non-orthodontist. Topics include how malocclusion develops and how growth can be modified during treatment of malocclusion. Attention is focused on normal and abnormal growth and development of the face, the occlusion and the dental arches and includes cleft palate and other craniofacial disorders. .4 cr, 1st sem. **(IDC)**

PE 764 Current Concepts in Periodontology

Provides an overview of various clinical entities that the general dentist encounters daily. Emphasizes recognition and diagnosis of periodontal disease along with classification of periodontal conditions in different states of health and disease. The course also gives an overview of periodontal therapy, including surgical procedures for the generalist and non-periodontology specialist. 0.7 cr, 1st sem. **(IDC)**

PE 817, 818, 819 Seminar: Grand Rounds

Weekly patient presentations by periodontic, prosthodontic, endodontic, pediatric dentistry and orthodontic residents, emphasizing comprehensive treatment planning. Residents and faculty discuss a treatment plan proposed by the presenting residents, along with alternative treatment plans. Stresses importance of interdisciplinary coordination of treatment. 1 cr, 1st and 2nd sem.; 1 cr, 3rd and 4th sem.; 1 cr, 3rd and 4th sem.;
(IDC, Distance Education from BU)

PE 827 Applied Dental Pharmacology

In this course we will examine pharmacological issues relevant to dentistry and oral biology. We will focus on pharmacology associated with symptoms detected in the oral cavity during treatment. These include but are not limited to autoimmune syndrome, HIV, and cardiac, neurological, and metabolic disorders. Medications associated with these conditions and their influence on the oral cavity will be discussed. 0.6 cr, 2nd sem. **(IDC, Distance Education from BU)**

PE 880 Seminar: Integration of Periodontology, Restorative and Implant Therapy

Discussions and case presentations on the integration of periodontology, restorative dentistry and implantology into a comprehensive treatment plan. 0.3 cr, 5th and 6th sem. **(IDC)**

PH 741 Behavioral Sciences

Focuses on developing a framework for delivering total health care. Examines the meaning and impact of effective communication skills, managing transitions, enhancing patient relations, and managing stress and pain. 0.4 cr, 1st sem. **(IDC, Distance Education from BU)**

PH 763 Bioethics and Law

Introduces models of applied ethics used within the field of dentistry. With lectures, case studies, and class discussion, residents engage in identification and analysis of ethical dilemmas. Topics include professional responsibility and ethical principles, the doctor-patient relationship, the dentist and the community, and ethical conduct in science. 0.5 cr, 2nd sem. **(IDC, Distance Education from BU with a supplemental review of local ethics and laws by a local attorney)**

PH 800 Introduction to Biostatistics/Epidemiology

Designed to provide residents in a clinical specialty program (CAGS) with skills in basic concepts of clinical research methods and statistical analysis. Acquaints the resident with basic data types and summary statistics for the study of disease in human populations. Designed for residents who have not had prior experience with statistics and epidemiology. 0.7 cr, 3rd sem. **(IDC, Distance Education from BU)**

PH 803 Biostatistics

Introduces the concepts and techniques of biostatistics used in dental research and referred to in the dental literature. Emphasizes the fundamentals of statistical logic and presents the basic principles of experimental design, statistical inference, and probability. Examples from current basic science research, survey research, and clinical trials augment the presentation of statistical theory. 4 cr, 4th and 5th sem. **(IDC, Distance Education from BU)**

PR 761 Occlusion

Principles of occlusion. The analysis and management of occlusal problems as related to periodontology, restorative dentistry, and tooth movement. 1.1 cr, 4th sem. (IDC)

PR 825 Postdoctoral Biomaterials

In-depth discussion of all dental materials related to the practice of restorative dentistry. Reviews the latest polymer and ceramic chemistry as well as the metallurgy of precious and nonprecious metals. 1.9 cr, 3rd and 4th sem. (IDC)

PR 844 Implantology Literature Review

A seminar course consisting of a comprehensive review of the current and classical literature in implantology and related fields. Review of the literature is followed by comment and discussion conducted by one of the masters in the field. 1.9 cr, 1st and 2nd sem. (IDC)

PR 846, 847, 848 Implantology Case Presentation

A case presentation course by periodontology, prosthodontic, oral surgery, and implantology residents on a variety of clinical implantology topics. 0.2 cr, 1st and 2nd sem.; 0.2 cr, 3rd and 4th sem.; 0.2 cr, 5th and 6th sem. (IDC)

EN 819 Endodontics for Prosthodontists

A series of lectures presented to residents enrolled in the postdoctoral programs in Periodontology and Prosthodontics. Topics include diagnostic procedures in endodontic practice, classification of pulpal and periradicular pathosis, management of endodontic emergencies, diagnosis and management of endodontic-periodontal lesions. .5 cr, 2nd sem. (IDC)

PR 832 Temporomandibular Disorders and Orofacial Pain

A comprehensive review of the anatomy, physiology, and pathology of the temporomandibular articulation and muscles of mastication. Pathophysiology of pain along with methods of diagnosis and treatment of orofacial pain. Special emphasis on the multidisciplinary management of patients with head and neck pain. 0.7 cr, 4th sem. (IDC)

Clinical and Laboratory Experiences

The emphasis of the clinical program is on the development of advanced knowledge and skills through supervised treatment of patients requiring complex prosthodontic treatment rather than the completion of a specific number of procedures. Nevertheless, experience has shown that certain minimal accomplishments in a variety of procedures are desirable to ensure proficiency. Residents are encouraged to maximize their experiences beyond these guidelines, and the Program Director reserves the right to increase or decrease the number of any of the following clinical or laboratory experiences. Some flexibility is permitted in meeting specific guidelines because each resident's patient mix varies considerably.

Clinical Experiences

Treatment Plans: No minimal number
Consultations: As assigned by faculty

Fixed Prosthodontics:

1. A total of 180 units are expected
2. These 180 total units should fall within the following guidelines:
 - Fixed Dental Prostheses: 80 units to include:
 1. Anterior and posterior FDPs - approximately 36 units
 2. Complete arches, fixed prosthodontics - 2 arches (approximately 24 units)
 3. Complete arches, combination fixed/removable - 3 arches (approximately 24 units)
 4. Attachment arches (fixed or removable) – 1

Included in the above total units of fixed prosthodontics, residents should complete:

- 80 complete crowns, either single units or retainers
- 12 partial coverage restorations, either single units or retainers
- 30 posts-and-cores
- 10 anterior and 10 posterior pontics

Combination Fixed/Removable: 2 arches

Removable Prosthodontics: A total of 22 units are expected within the following guidelines:

- Removable Complete Dental Prostheses:
 1. Both arches - 3-6 patients (6-12 units)
 2. Single arch - 2-4 patients (2-4 units), at least one occluding with RPD
 3. Immediate - 2 units of above
 4. Reline - 2 units
- Removable Partial Dental Prostheses:
 1. Single arch - 8 arches to include:
 2. Distal extension - 4
 3. Combination fixed/removable - 2
 4. Attachment retained RPD - 1
- Overdentures:
 1. Single arch – with attachments - 1 unit

Occlusion:

- Treatment is completed on semi-adjustable articulators or fully adjustable articulators.
- Other types of articulators as desired by faculty, e.g., simple hinge for a single-unit restoration.

Temporomandibular Disorders:

- Provide treatment for 1 patient with active signs and symptoms of TMD

Maxillofacial Prosthetics:

- Provide or observe treatment or follow-up care - 1 patient

Implant Dentistry:

- Implant Prosthodontics:

1. Provide implant prosthodontic treatment - 15 patients within the following guidelines:

- Implant-supported overdenture – 1 unit
- Partial arch, implant-supported restoration – 2 units.
- Implant-supported single crown – 2 units.
- Complete-arch, implant-supported restoration – 1 arch

Implant surgery:

- Residents must be involved in all areas of implant dentistry, including implant surgery. Minimal clinical experiences in implant surgery include:

serving as first assistant for 5 patients, and
serving as primary surgeon for 5 patients.

Laboratory Experiences

Fixed: Residents are expected to complete all laboratory procedures for 25 units of fixed prosthodontics. The Program Director will determine which units are completed entirely by the residents and which units may be completed with the assistance of a dental laboratory technician.

Removable: All removable prosthodontic laboratory procedures, except for fabrication of chromium-cobalt frameworks, must be completed by the resident. Therefore, residents must select and set all artificial teeth for removable dental prostheses and pack and process all acrylic resin bases.

Documentation

Residents must maintain current and accurate documentation of all clinical achievements in the clinic log (red book) with the use of the proficiency forms. Clinic logs, patient records, and all forms will be audited by the Program Director.

Calculating Units

Please note that when calculating the number of units completed for clinical experiences in postdoctoral prosthodontics, the following guidelines will be used:

Fixed Prosthodontics

The following will be considered one (1) unit:

- Complete metal crown
- Ceramic crown
- Metal inlay

- Metal onlay
- Porcelain inlay
- Porcelain onlay
- Porcelain laminate veneer
- Retainer for fixed dental prosthesis (including resin-bonded retainer)
- Pontic for fixed prosthesis
- Implant-supported crown (cemented or screw retained)
- Custom implant abutment
- Implant-supported pontic (not screw-retained prosthesis)
- Cast portion of screw-retained, implant-supported, metal/acrylic resin fixed prosthesis (one unit for each implant)

The following will be considered one-half (1/2) unit:

- Post coping for overdenture
- Implant-supported bar (one-half unit for every supporting implant)

The following will be considered one-third (1/3) unit:

- Cast post-and-core
- Prefabricated post with direct core reconstruction

The following will be considered one-tenth (1/10) unit:

- Each surface restored with a direct filling restoration (teeth that will not receive fixed restorations)

Removable Prosthodontics

The following will be considered one (1) unit:

- Removable complete dental prosthesis (including immediate denture or overdenture)
- Implant-supported, removable complete dental prosthesis
- Removable partial dental prosthesis with cast chromium cobalt framework (including attachment-retained removable prosthesis)
- Removable maxillofacial prosthesis
- Acrylic resin component of screw-retained, implant-supported, metal/acrylic resin fixed prosthesis

The following will be considered one-third (1/3) unit:

- Temporary complete or partial removable dental prosthesis
- Laboratory processed relines or rebase of removable dental or maxillofacial prosthesis
- Laboratory processed occlusal device
- Laboratory processed surgical guide template or radiologic template for implant prosthodontics

Competency and Proficiency Evaluations

1. Each resident will maintain a log book made up of Competency/Proficiency Evaluation Forms—one or more sheets for each patient. All treatment provided must be documented on these sheets with appropriate dates and signatures. Signatures should be obtained during clinic hours and while the patient is present. The faculty will also grade the resident's performance on these forms.
2. The Competency/Proficiency Books will be reviewed periodically by an assigned faculty advisor or the Program Director.
3. The Competency/Proficiency Books will be submitted to the Program Director at the completion of the third year of the program. These books represent the accomplishments of the residents during their clinical education and will be retained on file.

Completion of the Program

The postdoctoral CAGS/MSD program will be considered complete on or after June 30th of the third year when the following requirements have been met to the satisfaction of the Program Director and postdoctoral prosthodontic staff.

1. Clinical experiences have been completed satisfactorily.
2. The resident has demonstrated clinical proficiency in prosthodontics.
3. All didactic components have been completed with satisfactory grades.
4. Patient charts are complete (with dates, treatment entries, case summaries for completed patients, resident and instructor signatures) and are approved by the reviewing advisor and Program Director.
5. Resident Competency/Proficiency Book (clinic log) is completed, turned in, reviewed and accepted.
6. All patients not completed by a resident who has otherwise satisfied all program requirements must be reassigned by the postdoctoral prosthodontic Program Director. All diagnostic casts, definitive casts, dies, metal substructures, interocclusal records, etc. must be turned over to the new resident to enable the new resident to continue the treatment in an efficient manner. A transfer case summary must be written in the patient's chart by the transferring resident who is leaving school. An entry must appear in the patient's chart that the transfer of all case material has taken place and this entry must be signed by both residents.
7. Equipment, instruments, textbooks, clinical supplies, lockers, units, cabinets and other materials loaned to the resident must be properly turned in.
8. All tuition, research fees and bills for lost or damaged materials loaned to a resident must be met and discharged.

Interdisciplinary (IDC) Course Descriptions

The courses listed in this section include all interdisciplinary course descriptions. Because of the differences in program duration, those interdisciplinary courses stated as being offered in either "Fall" or "Spring" semester will vary as to which year they are offered. "Fall" refers to the 1st, 3rd, and/or 5th semester and "Spring" refers to 2nd, 4th, and/or 6th semester.

OB 761 Oral Microbiology

Distribution, ecology and pathogenic potential of oral microbiota. Pathogenicity of components of bacterial plaque and their role on the development of oral diseases. Mechanisms of local and systemic resistance to pathogenic oral microbiota. 1 cr, Spring sem. **(IDC, Distance Education from BU)**

OB 763 Basic Processes in Oral Biology

Examines biological processes at the cellular and molecular levels. Provides a basis to understand the events that regulate inflammation; wound healing; bone formation and resorption; salivary proteins and physiology; tooth development, eruption, and movement; and fluoride action. 2 cr, Fall and Spring sem. **(IDC, Distance Education from BU)**

OB 767 Oral Immunology

Defense mechanisms that the host utilizes against exogenous matter. Although the immune system is protective, there is also a destructive aspect that affects most tissue. The course examines these seemingly divergent mechanisms. 1 cr, Spring sem. **(IDC, Distance Education from BU)**

OB 830 Research Writing

Identifies and defines the components and uses of a research protocol, the underlying research methodology and data, and the construction of a prudent work schedule essential to complete a research project. Includes the development of a protocol based on the resident's thesis topic. 1 cr, Fall sem. **(IDC, Distance Education from BU)**

OS 761 Medical Concerns of the Dental Patient

A review of internal medicine and the management of the medically compromised dental patient. 1 cr, Fall and Spring sem. **(IDC)**

OS 828 Pain and Anxiety Control

A discussion of topics in pain and anxiety control, including pain physiology, local anesthetic techniques, patient management, and sedative techniques. 1 cr, Spring sem. **(IDC)**

OS 831 Head and Neck Anatomy

An in-depth discussion of head and neck anatomy, emphasizing implications of head and neck anatomy to clinical dentistry. 1 cr, Fall sem. **(IDC, Distance Education from BU)**

PA 801 Oral and Maxillofacial Pathology

A course for post-doctoral residents in the dental specialty programs covering a spectrum of diseases involving the oral and paraoral structures. Lectures will include fibro-osseous lesions, developmental disturbances affecting the jaws and teeth, odontogenic tumors, cysts of the oral and paraoral region, bacterial, viral and mycotic infections, benign tumors and tumor-like lesions, white lesions, pigmented lesions, vesicullo-bullous diseases, hematologic, endocrine, and metabolic disorders. 1 cr, Spring sem. **(IDC, Distance Education from BU)**

PD 832 Growth and Development

This course offers a clinically relevant understanding of craniofacial growth and development for the non-orthodontist. Topics include how malocclusion develops and how growth can be modified during treatment of malocclusion. Attention is focused on normal and abnormal growth and development of the face, the occlusion and the dental arches and includes cleft palate and other craniofacial disorders. .5 cr, Fall sem. **(IDC)**

PE 764 Current Concepts in Periodontology

Provides an overview of various clinical entities that the general dentist encounters daily. Emphasizes recognition and diagnosis of periodontal disease along with classification of periodontal conditions in different states of health and disease. The course also gives an overview of periodontal therapy, including surgical procedures for the generalist and non-periodontology specialist. 1 cr, Fall sem. **(IDC)**

PE 817, 818, 819 Seminar: Grand Rounds

Weekly case presentations by periodontic, prosthodontic, endodontic, pediatric dentistry and orthodontic residents, emphasizing comprehensive treatment planning. Residents and faculty discuss ideal and alternative treatment plans. Stresses importance of interdisciplinary coordination of treatment. 2 cr, Fall and Spring sem. **(IDC)**

PE 827 Applied Dental Pharmacology

In this course we will examine pharmacological issues relevant to dentistry and oral biology. We will focus on pharmacology associated with symptoms detected in the oral cavity during treatment. These include but are not limited to autoimmune syndrome, HIV, and cardiac, neurological, and metabolic disorders. Medications associated with these conditions and their influence on the oral cavity will be discussed. 1 cr, Spring sem. **(IDC, Distance Education from BU)**

PE 830 Clinical Applications of Oral Medicine and Oral Pathology

A systemic approach to the oral manifestations of systemic disease as well as a discussion of common oral lesions stressing therapeutics. 1 cr, Spring sem. **(IDC)**

PE 880 Seminar: Integration of Periodontology: Restorative and Implant Therapy

Discussions and case presentations on the integration of periodontology, restorative dentistry and implantology into the comprehensive treatment plan. 1 cr, Fall and Spring sem. **(IDC)**

PH 741 Behavioral Sciences

Focuses on developing a framework for delivering total health care. Examines the meaning and impact of effective communication skills, managing transitions, enhancing patient relations, and managing stress and pain. 1 cr, Fall sem. **(IDC, Distance Education from BU)**

PH 763 Bioethics and Law

Introduces models of applied ethics used within the field of dentistry. With lectures, case studies, and class discussion, residents engage in identification and analysis of ethical dilemmas. Topics include professional responsibility and ethical principles, the doctor-patient relationship, the dentist and the community, and ethical conduct in science. 1 cr, Spring sem. **(IDC, Distance Education from BU)**

PH 800 Introduction to Biostatistics / Epidemiology

Designed to provide residents in a clinical specialty program (CAGS) with skills in basic concepts of clinical research methods and statistical analysis. Acquaints the resident with basic data types and summary statistics for the study of disease in human populations. For residents who have not had prior experience with statistics and epidemiology. 1 cr, Fall sem. **(IDC, Distance Education from BU)**

PH 803 Biostatistics

Introduces the concepts and techniques of biostatistics used in dental research and referred to in dental literature. Emphasizes the fundamentals of statistical logic and presents the basic principles of experimental design, statistical inference, and probability. Examples from current basic sciences research, survey research, and clinical trials augment the presentation of statistical theory. 1 cr, Fall and Spring sem. **(IDC, Distance Education from BU)**

PH 831 Presentation Skills

Develops and fine-tunes teaching and presentation abilities. Focuses on instructional design, presentation graphics and presentation skills. Hands on learning experience. 1 cr, Spring sem. **(IDC, Distance Education from BU)**

PR 761 Occlusion

Principles of occlusion. The analysis and management of occlusal problems as related to periodontology, restorative dentistry, and tooth movement. 1 cr, Spring sem. **(IDC)**

PR 825 Postdoctoral Biomaterials

In-depth discussion of all dental materials related to the practice of restorative dentistry. Reviews the latest polymer and ceramic chemistry as well as the metallurgy of precious and nonprecious metals. 2 cr, Fall and Spring sem. **(IDC)**

PR 844 Implantology Literature Review

A seminar course consisting of a comprehensive review of the current and classical literature in implantology and related fields. Review of the literature is followed by comment and discussion conducted by one of the masters in the field. 1 cr, Fall and Spring sem. **(IDC)**

PR 845 Implantology Topics

A presentation course given by leading experts of implantology with emphasis on current and classical implantology topics. 1 cr, Fall and Spring sem. **(IDC)**

PR 846, 847, 848 Implantology Case Presentation

A case presentation course by periodontology, prosthodontic, oral surgery, and implantology residents on a variety of clinical implantology topics. 1 cr, Fall and Spring sem. **(IDC)**

Other Course Descriptions

EN 819 Endodontics for Prosthodontists

Series of lectures presented to residents enrolled in the postdoctoral programs in Periodontology and Prosthodontics. Topics include diagnostic procedures in endodontic practice, classification of pulpal and periradicular pathology, management of the endodontic emergency, diagnosis and management of endodontic-periodontic lesions. .5 cr, 2nd sem.

EN 820 Endodontics for the General Practitioner

Series of lectures presented to the residents enrolled in the advanced education program in general dentistry (AEGD). Topics include: diagnostic procedures in the practice of endodontics; classification of pulpal and periradicular pathoses; management of endodontic emergencies; management of traumatic injuries to the dentition; management of fascial space infections of odontogenic origin; preparation of the root canal system; obturation of the root canal system; and pulpal and endodontic surgery. .5 cr, 1st sem.

OR 760 Orthodontics for the General Practitioner

A review of orthodontics in general dentistry focusing on recognition and diagnosis of malocclusions, interceptive orthodontics, space maintenance, and realignment of space. .5 cr, 2nd sem.

OS 866 Orthognathic Surgery

Combined conference between orthodontic and OMFS departments designed to familiarize residents with the problems associated with the diagnosis and treatment of dentofacial deformities. Stresses orthodontic principles and surgical techniques, and team evaluation. 1 cr, 3rd and 4th sem.

PD 760 Pediatric Dentistry for the General Practitioner

A series designed for the AEGD resident to review diagnosis, treatment planning, therapeutic, and preventive procedures for the pediatric patient. .5 cr, 2nd sem.

PR 780 Seminar: Geriatrics and Gerontology

An in-depth analysis of current issues in our aging population, including demographic profiles, long-term care, financial considerations, and case discussions. Articles from current literature will complement the information discussed in the seminar. 1 cr, 2nd sem.

PR 800 Seminar: Prosthodontic Literature Review

An in-depth review of procedures and techniques in restorative dentistry, including an extensive review of a wide range of research articles discussing restorative procedures and innovations. 1 cr, 1st and 2nd sem.

PR 810 Seminar: Case Presentation and Treatment Planning

A comprehensive seminar exploring diagnosis, treatment planning, and management of ongoing clinical cases. 1 cr, 2nd sem.

PR 813 Literature Review in General Dentistry

A weekly seminar and review of current and classic articles of different disciplines in general dentistry. 1 cr, 1st and 2nd sem.

PR 810 Seminar: Case Presentation and Treatment Planning

A comprehensive seminar exploring diagnosis, treatment planning, and management of ongoing clinical cases. 1 cr, 2nd sem.

PR 813 Literature Review in General Dentistry

A weekly seminar and review of current and classic articles of different disciplines in general dentistry. 1 cr, 1st and 2nd sem.

PR 816 Seminar: Implantology

Comprehensive course covering the history of implants, tissue biocompatibility, and biomechanics. Encompasses implants, tissue biology, patient selection, diagnosis, treatment planning, and literature review. Includes presentation of oral surgery and prosthodontic considerations utilizing different implant systems. 1 cr, 2nd sem.

PR 828 Esthetic Dentistry

Introduces resident to principles, treatment planning, treatment methodology and the most recent developments in esthetic dentistry. Course is designed to prepare residents to diagnose, plan and provide clinical care to patients with problems related to dental esthetics. Topics include: principles of esthetic dentistry, tooth bleaching, use of direct and indirect resins, ceramic veneers, ceramic inlays/onlays, esthetics in fixed prosthodontics. 2 cr, 1st and 2nd sem.

PR 832 Temporomandibular Disorders and Orofacial Pain

A comprehensive review of the anatomy, physiology, and pathology of the temporomandibular articulation and muscles of mastication. Pathophysiology of pain along with methods of diagnosis and treatment of orofacial pain. Special emphasis on the multidisciplinary management of patients with head and neck pain. 1 cr, 4th sem.

PR 840 Practice Management for the General Practitioner

Addresses many of the non-technical aspects of dental practice, including office location, design, financing, and management of auxiliary staff. Discusses principles of peer review, quality management, business management and practice development, professional ethics, managed care, alternative health care delivery systems, referral issues, insurance, retirement plans, and investing strategies. 1 cr, 2nd sem.

PR 852 Implantology for the General Practitioner

A series of lectures covering the history of implants, tissue bio-compatibility, and bio-mechanics. Encompasses tissue biology, patient selection, diagnosis, treatment planning, and literature review. Includes presentation of oral surgery and prosthodontic considerations utilizing different implant systems. 1 cr, 1st and 2nd sem.

PR 905 General Dentistry Clinic

This 12 month long clinical component consists of approximately 1500 hours of comprehensive patient care. Residents are supervised and evaluated in specific criteria: quality of clinical work, ability to assess their own work, diagnostic skills, patient referrals, and ability to work with a range of dental specialists. In effect, the residents act as directors of the patients' total oral health care. 15 cr, 1st and 2nd sem



2009/2010 ACADEMIC CALENDER

Jul 1 – Sep 4

Summer Session

July 1-3, 2009

General Resident Orientation

July 6-9, 2009

Departmental Orientation

July 19, 2009

Holiday, Eid Al Isra Wal Mi'raj

Sep 4 – Jan 31

First Semester

September 20 -22, 2009

Holiday, Eid Al Fitr

November 26, 2009

Holiday, Mount Arafat Day

November 27-29, 2009

Holiday, Eid Al Adha

November 30 – December 10. 2009

Institute Holiday

December 2, 2009

Holiday, UAE National Day

December 24, 2009

Holiday, Christmas Eve

December 17, 2009

Holiday, Hijri New Year

January 1, 2010

Holiday, New Year

Feb 1 – Jun 18

Second Semester

February 25, 2010

Holiday, Prophet Mohammed B-day

June 18-3 July, 2009

Summer Holiday

This Academic Calendar is subject to change.

Academic Policies

Function of the Curriculum Committee

The Curriculum Committee is charged to develop the curriculum and to schedule classes; evaluate the curriculum periodically and undertake special tasks toward improving the curriculum; meet periodically with resident representatives and course faculty to evaluate the curriculum; and make recommendations for substantive changes and the introduction of new programs to the Executive Committee. Resident evaluation and promotion is the responsibility of individual program directors. However, the Curriculum Committee also serves an oversight function in matters of resident promotion, graduation and academic discipline. Program directors may bring issues relating to resident academic evaluation to the committee for advice and support.

Composition of the Committee

The selection of the Curriculum Committee and its chairperson shall be made by the Chief Academic Officer.

Committee Meetings

The Curriculum Committee will meet on a regular basis throughout the academic year. To keep meetings to within a brief, productive time frame, an agenda will be circulated in advance to committee members, along with background material needed for planned discussion. Minutes of previous meetings will also be circulated in advance of each meeting.

Meeting minutes will be distributed to the Chief Academic Officer, each postdoctoral program director, and to all regular committee members.

Curriculum Evaluation

Effectiveness of each didactic and laboratory course will be evaluated annually by the Curriculum Committee. Clinical faculty will be evaluated annually by the Chief Academic Officer. The Chief Academic Officer and program directors shall discuss course evaluations annually with the Curriculum Committee as part of ongoing curriculum review.

At the end of each course, course leaders distribute and collect course and instructor evaluation questionnaires. Evaluation data forms will be forwarded to the Boston University Office of Educational Research and Evaluation, which will develop a report. This report should be reviewed with the appropriate faculty by the Chief Academic Officer.

Textbook and Course Material

Required texts for a course should be placed on the resident book list. A substantial handout prepared by the department which is the sole text for a course or portion of a course may be charged to the resident within reasonable costs and quality. Any such handouts shall be reported to the Office of the Chief Academic Officer when information for required textbooks is requested. The cost of any supplementary course handout material shall be absorbed by the BUIDRE. Residents should have advance notification of any costs of department handouts by adding them to the required textbook list.

Academic Schedules

Academic schedules for each program are published in June, prior to the commencement of the academic year, and will be part of your program manual. During the academic year requests for any and all changes in course schedules must be submitted to the Office of the Chief Academic Officer for approval and implementation one month in advance, if possible. Interdisciplinary courses are defined as those courses that are attended by residents of more than one postdoctoral program. Course leaders must review their course schedules and confirm topics and time commitments of faculty for each coming month. The addition of lectures, special lectures or guest lecturers should also be cleared through the Office of the Chief Academic Officer one month in advance, when possible. To avoid conflicts in scheduling, course directors should specifically refer to the Office of the Chief Academic Officer any resident requests for changes in lecture, lab or examination schedules.

Course Registration Policy

Residents are not required to register for courses. The Manager of Resident Services will prepare and post on-line grade sheets and class lists and make them available to residents. Program faculty will be required to submit a written memo at the beginning of each academic year, with names and ID #'s to indicate any residents' course exemptions and to register residents' course retakes. A memo will also be required indicating any changes made to the published curriculum during the academic year. Without a written memo indicating exceptions to the published curriculum, it will be expected that all residents in a Certificate Program will attend the classes listed in the current catalog. Those courses will appear on resident transcripts.

All memos indicating alterations in resident course registration are to be submitted to the Manager of Resident Services by the first week in August, to ensure that course instructors receive accurate information.

Policy on Transfer of Courses and Course Exemptions

Transfer of courses from another institution simply on the basis of a transcript is not accepted. At the discretion of the program director and course director, residents may have the option to take an exemption examination. A form for formally petitioning for course exemption is available in the Academic Office. Any petition must be submitted to the course director prior to the beginning of the second week of the course. Residents may not exercise this option without the approval of their program director. Exemption examinations will be sufficiently challenging to be a true test of the resident's mastery of course content. Once a resident successfully completes an exemption examination, a resident will be exempted from the course and it will be the responsibility of the course director to contact the Manager of Resident Services.

Exemption requests for all courses should be made at the beginning of the academic year. After reviewing course exemption requests, departments will forward a memo to the Manager of Resident Services, with all approved exemptions. The following information should be included in the memo: program name, resident name with ID number, exempted course name and number.

Residents who transfer from one postdoctoral program to another within the BUIDRE should request exemptions through their Program Director (to be determined by each department). The reason for this is that course requirements and course exemptions vary by department. Residents requesting an exemption for a course already taken at BUIDRE will be required to request that a transcript be forwarded to their current program for review.

Policy on Continuing Education Courses

The Office of the Chief Academic Officer works with each of the individual programs to promote the education of our residents. Some programs may require residents to participate in the BUIDRE's continuing dental education courses as part of the program's curriculum. There is no charge for residents for mandatory continuing education courses. If a resident opts to participate in a continuing education course which is not part of their program's curriculum, there will be a nominal fee for this course.

Residents must get advance written approval of their program director to attend non-required continuing education courses. Continuing education courses have a limited number of openings for attendees. For this reason, once a resident registers for a course and signs out of clinic for the day, he or she is expected to attend the course in its entirety. Attendance will be taken at each course and copies of the attendance sheets will be forwarded to appropriate program directors.

Policy on Extended Program

Any resident who must extend professional preparation beyond the regular scheduled program will be registered and pay tuition and fees.

Residents remaining past the program end date to complete clinical requirements will be registered and assessed a partial tuition and fees.

Residents who are enrolled in a research program, and have completed all their program requirements, and are in the process of writing their thesis or dissertation, will be registered and assessed a continuing resident fee.

Payment of these fees entitles a resident to appropriate access to BUIDRE libraries, research laboratories, academic staff, and other academic facilities for the purpose of completing their degree requirements.

Policy on Residents Withdrawal from Courses

Postdoctoral residents are discouraged from withdrawing from a course(s). Course withdrawal should only be done in unusual circumstances. To withdraw from a course, a resident must have the approval of the Chief Academic Officer as well as the Program Director or Research Advisor. Please note that departments have specific graduation requirements for their program and withdrawing from class could result in an extension of the resident's program, as well as the resident incurring additional tuition and fees.

In general, postdoctoral residents may withdraw from a course during the first 1/3 of the course without penalty and with no grade recorded in the transcript. Residents withdrawing after the first 1/3 of a course will receive whatever grade has been earned from the course.

Policy on Missed Examinations

Any resident who misses an examination due to illness must contact the course director PRIOR to the start of the examination. It is the responsibility of the resident to make arrangements with the course director to make up the missed examination in a timely manner. A resident who misses an examination in one of the Interdisciplinary Curriculum courses should not only contact the course director but also the Office of the Chief Academic Officer. A resident who contacts the course director or Office of the Chief Academic Officer to claim a medical reason for missing an examination after the completion of the examination must show medical authorization for not being present.

Policy on Absence for Religious Reasons

The BUIDRE observes federal holidays only. The BUIDRE remains open during certain religious holidays. If a resident intends to be absent for a religious holiday not listed in the academic calendar, it is imperative that the program director be notified well in advance. It should be understood that days absent from the program for religious purposes will be considered vacation days. Course and program directors will make every effort to coordinate examinations to avoid conflicts with religious holidays and will provide every opportunity for residents to make up examinations missed due to religious holiday absence. Please refer to the BUIDRE academic calendar.

Policy on Leaves of Absence

A resident in academic good standing requesting a leave of absence must state the reasons and the duration of the leave of absence. The request must be in writing and shall first be approved by the Chief Academic Officer and then by the program director. If the request is approved, return to a program can only be effected through a protocol determined when the leave of absence is affected. If a leave of absence is not granted, withdrawal or unauthorized absence from a program can lead to dismissal and return to a program can only be accomplished through a formal reapplication to the school.

A resident in academic difficulty may request a leave of absence from a program. The request must be in writing and shall first be approved by the Chief Academic Officer and then by the appropriate program director. If a leave of absence is not granted, withdrawal or unauthorized absence from a program can lead to dismissal and return to a program can only be accomplished through a formal reapplication to the school.

A resident on academic probation may not be granted a leave of absence from any program. Withdrawal or unauthorized absence from a program can lead to dismissal and return to a program can only be accomplished through a formal reapplication to the school.

Refund Policy for Withdrawal or Leave of Absence

A resident who is registered for a semester and who decides not to attend must take an official withdrawal or leave of absence. Withdrawals are initiated when the resident wishes to permanently leave BUIDRE. Leaves of absence, however, are taken when the resident wishes to leave BUIDRE, but intends to return in a future semester. The withdrawal or leave of absence is effective on the date the Withdrawal/Leave of Absence Form is received by the Office of Resident Services. All residents who wish to withdraw or take a leave of absence must file an Official Withdrawal/Leave of Absence Form with the Manager of Resident Services.

BUIDRE Spring 2008 Withdrawal Tuition Refund Schedule

<u>Date</u>	<u>Refund</u>
Prior to first day of the semester (before Tuesday, July 1, 2008)	100% tuition and fees
July 1- July 6, 2009	80% tuition only
July 7-July 13, 2009	60% tuition only
July 14-July 20, 2009	40% tuition only
July 21 July 27, 2009	20% tuition only
As of July 28, 2009	0%

Policy on Moonlighting

Some programs allow residents to work for financial compensation outside of the regular clinical activities that are part of the program's curriculum. This is called "moonlighting". Not all programs allow this practice. Your individual program orientation manuals will specify if you are allowed to moonlight and will detail any limitations to moonlighting. Any resident anticipating moonlighting must receive written permission from the program director and the Chief Academic Officer. Non-UAE residents should understand that moonlighting may have serious implications for their immigration status. Any international resident who is considering moonlighting must have written clearance from their Program Director, Office of the Chief Academic Officer and from the DHCC Center for Planning and Quality (CPQ). Residents who moonlight without appropriate authorization are subject to dismissal from the program.

Finances and Financial Aid

Tuition and Fees 2009-2010

Postdoctoral Residents	Per Year	Per Semester
<u>Tuition</u>	\$40,000	\$20,000
<u>Research Fee</u>	\$3,800	N/A
<u>Instrument Fees:</u>		
Endodontics	\$18,756	
Dental Microscope	\$18,000	\$9,378
Orthodontics	\$2,800	\$1,400
Pediatric Dentistry	\$2,968	\$1,484
Periodontology	\$8,450	\$4,225
Prosthodontics	\$13,968	\$6,984

- Tuition costs cover full-time attendance at BUIDRE.
- The postdoctoral continuing resident fee of \$5,000 per year or \$2,500 per semester is charged for residents who do not complete their thesis requirements on schedule.
- The research fee is a one-time fee (assessed in the first year of the fall semester) that supports the services, equipment, supplies, and other expenses relevant to each resident's research project.
- Instrument fees vary by department. The resident purchases the instrument kit and it then becomes the property of the resident.
- It is anticipated that tuition will increase approximately 5 % per year.

Financial Aid

The Manager of Resident Services coordinates financial aid services. BUIDRE does provide limited scholarship support for qualified residents with need. The Office of the Manager of Resident Services has an application form for residents requesting financial aid. The Manager of Resident Services chairs the Financial Aid Committee. This committee develops resident aid policy for BUIDRE and adjudicates resident financial aid appeals.

Resident Conduct and Behavior

Residents must conduct themselves with the integrity expected of all professionals. Their obligations must be met in full. Dishonesty in examinations or non-professionalism in any of their dealings with clinic patients, faculty, staff, administration or other residents will be regarded as a serious disciplinary action. In their personal habits of dress and cleanliness and observance of amenities residents will be expected to reflect credit upon themselves, BUIDRE and the Profession, and give every indication that they will continue to do so through their careers. Resident cooperation in matters of neatness applies to clinics, classrooms, and public areas, dining areas, labs and resident lockers. The cooperation of every resident is expected. The nature of professional study is difficult and requires regular attendance. Residents are expected to be present at all classes and laboratory periods. When a resident is assigned to rotations, it is his/her responsibility to obtain the classroom notes and other pertinent information regarding class and/or clinical activities.

BUIDRE places strong emphasis on attainment and expression by its residents of those values and attitudes that are the hallmark of a professional. To this end, residents are expected to conduct themselves in a professional manner at all times in all their associations with the faculty, each other, auxiliary personnel, patients and BUIDRE staff. Once residents begin treating patients they continue to mature professionally and gain a deeper sense of responsibility. Anything less than the highest order of professional conduct on the part of the resident can result in the loss of the patients' confidence in the resident, BUIDRE and the profession.

Resident Expected Behavior

- A. Residents must treat patients with the realization that the health and welfare of these patients is paramount, and residents must respect the dignity and feelings of their patients in working with them.
- B. Residents must interact with the staff, faculty and fellow residents in a manner that is consistent with fostering a supportive and respectful environment.
- C. Residents must conduct themselves in a mature, courteous, and professional manner in academic classes and seminars, clinics, and laboratories, and in other areas of BUIDRE and associated teaching facilities.
- D. Diligence is an expected behavior. This means that residents are expected to be in class, clinic or laboratory every day and prepared for work.

It is not possible, nor should it be necessary, to describe every type of behavior which is a violation of the Academic Code of Conduct. Conduct that is in derogation or subversion of academic or professional integrity is a violation. The following is not exhaustive but is intended to give examples of actions that would constitute a violation.

Resident Prohibited Behavior

I. Providing unauthorized assistance, including but not limited to:

- Giving, attempting to give, receiving or allowing unauthorized assistance to occur during an examination or exercise.
- Permitting another resident to copy or copying from an examination or exercise.

II. Plagiarism including, but not limited to:

- Presenting the work of another as one's own.
- Allowing another resident to represent your work as his or her own.

III. Knowingly furnishing false information, forgery, alteration or misuse of:

- Graded examinations, grade lists, or official university records or documents.
- Transcripts, letters of recommendation, degree certificates.
- Examinations or other work after submission.
- Patient records and charts.
- Classroom attendance or resident preclinical and clinical records.
- Misrepresentation of a resident's credentials or status.
- Patient records, by unauthorized removal of such documents from their locus of instruction or storage, or unauthorized use or dissemination of personal or private information in such documents.
- Prescriptions or controlled substances.

IV. Unprofessional treatment of patients including, but not limited to:

- Treating patients without authorization or supervision by faculty.
- Treating patients in unauthorized clinical settings.
- Accepting personal monetary payment from patients for services.
- Waiving patient payment responsibilities without authorization, or otherwise acting in disregard of patient-related contracting and financial policies of BUIDRE.
- Failing to comply with clinic policy.
- Failing to maintain accepted protocols regarding infection control and DHCC CPQ standards.
- Treating a patient while under the influence of alcohol or drugs.
- Refusal to properly treat any patient for reasons of gender, race, color, creed, national origin, financial status, or disability.
- Patient abandonment.
- Violating patient rights to confidentiality or improperly disclosing confidential patient information.
- Falsifying patient records in any manner, e.g. by changing previous entries, making false entries, or by forging signatures, with or without intent to defraud, injure or deceive another.

V. Theft or destruction of property: including, but not limited to:

- Examinations or papers after submission, including purposefully altering possible poor performance.
- Unauthorized possession of someone else's property, such as laboratory or dental equipment, or the books or papers of another resident.
- Unauthorized use of clinic facilities or supplies.
- Unauthorized reproduction, distribution, or sale of class notes, examinations, or other class materials without the express written consent of the author.
- Theft or destruction of examinations or papers after submission, including purposefully altering possible poor performance.
- Altering or destroying another person's work or records, including altering records of any kind (whether hard copy or electronic), removing materials from libraries or offices without consent, or in any way interfering with the work of others so as to impede their academic performance.
- Defacing or vandalizing university facilities or other personal property.

VI. Interference with or disruption of the regular operations and activities of BUIDRE, including, but not limited to:

- Teaching and research, information technology, disciplinary proceedings, service functions, or other authorized activities occurring on the premises of BUIDRE or affiliated institutions.

VII. Violation of Dubai Healthcare City's condition of use and policy on computing ethics and/or BUIDRE's computer ethics policy.

VIII. Violation of public law

- When such violation occurs by a resident enrolled within a program of BUIDRE or affects the professional interests or standards of BUIDRE, whether or not occurring on campus.

X. Failure to comply with the sanctions imposed under the authority of this code

XI. Any conduct in subversion of the academic and professional standards of the Boston University Institute for Dental Research and Education Dubai.

Probation and Suspension of Residents

Academic Probation

The purpose of placing a resident on Academic Probation is to provide an unambiguous warning that his/her academic achievement is not meeting the standards presented within the Promotions Guidelines of his/her academic program.

Policy Regarding Academic Probation

When academic probation is recommended, the resident shall be notified of this important change in academic status, and the notification shall contain the reasons for this action and what must be accomplished within a specified time frame in order to be removed from academic probation.

A resident cannot be promoted nor graduated from a program if he/she is on academic probation. A resident may be maintained on academic probation until the deficiency/ies for which he/she was originally placed on academic probation have been remedied.

Academic Suspension

The purpose of academic suspension is to remove from a program a resident who has failed to heed the warning of being placed on academic probation by not remedying those deficiencies that required this action.

Policy Regarding Academic Suspension

In general, such action can be initiated at any time after 90 days from first probation. However, this time period may be shortened or eliminated by the Curriculum Committee.

Academic suspension may be temporary or maintained for an indefinite period. The resident must be informed in writing of any change in academic status from "Probationary" to "Suspension". The reasons for this important change in academic status and its duration (temporary or indefinite) shall be given. If the suspension is temporary, the resident shall be informed of what must be done to be removed from this status.

Dismissal

An action for dismissal may be initiated only if the faculty agrees that a resident's academic performance or lack of performance (e.g., unauthorized absences) justifies dismissal.

Policy Regarding Dismissal

In general, such action can be initiated at any time after 90 days from first probation. However, this time period may be shortened or eliminated by the Curriculum Committee. The resident and all members of the Curriculum Committee shall be notified, stating the reasons for the recommendation of dismissal.

Resident Services

Office of the Manager of Resident Services

The Office of Resident Services coordinates the following activities:

- Certification:** The Office of Resident Services provides residents and other parties with verification of a resident's enrollment and/or graduation. All requests must be made in writing.
- Financial Responsibilities:** It is the resident's responsibility to ensure that all financial obligations are up-to-date during tenure at BUIDRE.
- Health Insurance:** All residents must have proof of health insurance during their tenure at the BUIDRE. Residents wishing to participate in BUIDRE's resident health insurance program should consult the office for enrollment information.
- Identification Cards:** All full-time residents will be issued a photo identification card. This ID card allows residents to use appropriate facilities. There is a 50 AED replacement fee.
- Transcripts:** Transcripts are available in this office by completing a "Transcript Request Form." Allow at least ten working days for processing and mailing.
- Email:** BUIDRE and Boston University provides free email accounts to all of its residents. As a member of the BUIDRE community, you are required to open and maintain an email account. This account allows you to stay informed and communicate efficiently with the BUIDRE community.
- Change of Address:** If your address (home, local or billing) or telephone number changes at any time during your enrollment at BUIDRE, please visit the Manager of Resident Services.

Health Care

Boston University Institute for Dental Research and Education Dubai is committed to improving the oral health of our community.

Counseling

During your time at BUIDRE, you may have questions about academic or other matters. The Office of the Chief Academic Officer and The Office of the Manager of Resident Services will provide residents with information, resource referrals, and counseling on academic and resident related issues.

Academic Advising, Tutoring, Career Counseling

The Manager of Resident Services coordinates advising and counseling activities at the BUIDRE. The Office of Resident Services is located in the Academic suite on the first floor of the school. At matriculation each resident is assigned to a research advisor.

With the small class sizes at BUIDRE and with a high instructor to resident ratio, residents enjoy a close relationship with their clinical instructors who act as prime academic advisors. However, the BUIDRE recognizes that academic advice in addition to day-to-day interaction with classroom, clinical and research mentors may be necessary. The Office of Resident Services is available for academic advising and resident advocacy. Although tutoring is not commonly necessary, the Office of Resident Services can arrange for a tutor through a faculty member or upper class resident. There is usually no extra tuition cost for tutoring services. The office also will work with residents on career counseling and placement.

Resident Organizations

Resident organizations at Boston University Institute for Dental Research and Education Dubai (BUIDRE) are established and managed by the residents who wish to participate. To establish a new organization, interested residents must submit a mission statement to the Manager of Resident Services at the beginning of the academic year (by September 30). Included with the mission statement should be a general overview of proposed activities associated with the group. The Office of Resident Services requires resident organizations to seek the assistance of faculty advisors for their group and to notify the Office of Resident Services of the selection of an advisor or need for assistance in finding one. Organizations are encouraged to develop acceptable protocols for fundraising to provide for ongoing organization expenses.

Library

When opened, the Maktoum Harvard Medical Library will be available to BUIDRE residents, staff and faculty. The library will be opened with 5,000 books and 400 journals plus additional electronic resources. The facility will provide on-line access to numerous journals. The resources that they have access to may be particularly helpful in commercializing research results (e.g., Nexus/Lexus, etc.). Several of these services would require a fairly high cost subscription to access as an individual.

Please refer to the BUIDRE Library Guide for detailed Library Services information.

Spiritual Facilities

BUIDRE respects the spiritual needs of residents, faculty and staff. A prayer room located on the ground floor of BUIDRE is available to all members of the BUIDRE community.

The BUIDRE Building

The Boston University Institute for Dental Research and Education Dubai has a dual mission to provide state of the art specialized dental education and evidence based approach to the oral health care of the citizens of the United Arab Emirates and the neighboring states.

BUIDRE is located in the Dubai Healthcare City, on the ground floor and half of the first floor of what is known at the J&J Building (Building 34). Two streets with sidewalks board BUIDRE's building, and are accessible to both public and private transportation methods. Parking is available above and underground (basement levels one and two). The building has a service access and a main lobby with a ramp access.

The facility occupies approximately 21,000 square feet of space. The facility with all its components meets the standards for access put forth by the Americans with Disabilities Act (ADA), the applicable regulations of the Center for Healthcare Planning and Quality at DHCC, DEWA and all applicable local laws and regulations, including the fire code and biohazard waste management.

BUIDRE will be providing the appropriate space, environment and equipment to serve the goals and objectives of each of the educational programs and clinical activity it will be engaging. All spaces are air conditioned, hallways and lobbies are monitored by closed caption cameras, building security is available 24/7, custodial services are performed every night on a schedule and on demand, the building's exterior, pest control and landscaping will be maintained. There is emergency power generation in the building.

Technical support and maintenance of the facility will be available on site. An equipment repair room on the ground floor is dedicated to serve this purpose. An onsite biomedical engineer will be assigned to repair and perform preventive maintenance on the facility's equipment. Digital data drops are available in every operatory, office, laboratory bench, podium and reception desk. Wireless broadband connection will also be available. The information technology staff is also located on-site on the ground floor and will be handling all aspects of IT support for faculty staff and residents.

Ground Floor

The ground floor of the Institute is occupied by the patient treatment rooms, including a 2 unit clinical research center, patient waiting and reception areas, play area for the pediatric patients, prayer room, X-ray rooms, record room, administrative offices, staff room, lockers, sterilization room, supply room, dental laboratory facility, equipment repair room, mechanical room, security room, IT server room, IT support and help desk, restrooms, utility rooms and ample storage areas.

First Floor

Two stairwells and 2 elevators connect the first floor to the ground floor. The first floor is primarily an academic space where AV equipped conference/meeting rooms are available for departmental seminars. The 40-seat lecture hall is equipped with state of art AV equipment; it is the main venue for interdisciplinary courses, live conferencing with Boston Medical Campus and

serves as a room to hold written examinations. There is also one large conference room contiguous to the lecture hall with a capacity of 14. The wall between the lecture hall and conference room folds to allow a greater seating capacity. There are also three smaller seminar rooms each with a capacity of 6.

The library/study hall with its resources and supporting systems is also located on the first floor, it provides books journals, computer stations, and a circulation and help desk to support the residents.

Faculty and administrative offices with reception areas are located on the first floor. These offices provide faculty with the appropriate space and equipment to prepare educational material, hold quarterly meetings with residents, and interact with their peers. The offices of the Chief Executive Officer/Chief Academic Officer, Dental Director, Resident Services Manager and supporting staff form a cluster on the first floor. This cluster creates a friendly environment where residents, faculty and staff can engage the administration, and seek support.

Financial Resources

Dubai Healthcare City will be responsible for financial obligation associated with the development, establishment, operation, and management of BUIDRE.

Information Technology and Instructional Support

Technology Resources

Technology is an important tool for optimizing residents' clinical experience, which is an important goal of the specialty programs. Boston University Institute for Dental Research and Education Dubai is equipped with state-of-the art information technology solutions and tools. Assistance will be provided to enable BUIDRE residents to become proficient in using technology to its fullest capacity. This proficiency will facilitate a smooth transition to private practice by enabling residents to apply their knowledge to provide the highest possible quality of service to patients and to increase productivity effectively and efficiently.

BUIDRE's investment in the following information technology (IT) and support is fundamental to its overall information technology strategy:

- State-of-the art network infrastructure.
- High-speed Internet access (high bandwidth for download and upload) that enables day-to-day operations and webcasting.
- Various clinical and distance education software and technology including: Live Conference (by Horizon Wimba), Apreso Classroom (by Echo 360), Course Info (Blackboard), Lexi-Comp (web based prescription drugs software), and scientific database search engines like PubMed, Access Medicine, MDConsult, Blackwell Synergy, Cochrane Library, OVID, Taylor and Francis Medical College, CINAHL.
- Digital Radiography for paperless patient records. This capability will serve two functions: 1) Integrating technology with teaching methodologies; and 2) Seamless two-way communications between BUSDM and BUIDRE for research and consultation.
- Database driven applications include the Clinical Information System; Resident Evaluation and Performance System.
- Microsoft Office will be adopted and will assist residents in their academic training including Word, PowerPoint, and Excel. These tools will assist the residents in preparing for their case studies, statistical analysis, and research.
- Data Mining Statistical Analysis Software Predictive: SPSS and SAS are statistical packages that will be available for residents and faculty for their research activities.
- Information technology implementation, consulting, training, and support. Residents, faculty, and staff will be provided with comprehensive training on all applications used at BUIDRE.

IT Applications in Education

To help residents recognize the importance of lifelong learning and self-assessment in maintaining competency, BUIDRE invests extensively in the application of IT to facilitate 1) application of state-of-the art technology to the educational experience 2) resident learning and attainment of competency in its competency-based educational programs; 3) faculty teaching through computer-assisted instruction that promotes active learning and integration of sciences;

and 4) the delivery of comprehensive patient care. The following highlights key areas in using information technology:

A) IT functions and capabilities

BUIDRE has several different clinical and distance education software and technology:

- Live Conference (synchronous communication).
- Apreso Classroom (Pre video-taped classroom lectures).
- CourseInfo and the Internet to store and deliver faculty materials to residents.
- Online Resident Evaluation and Performance System.
- Lexi-Comp (Web based prescription drugs software).
- Electronic Clinical Information System.

“Live Conference” tool from Horizon Wimba is part of the Web Conferencing definition. This web conferencing product is hosted at Boston University at <http://liveclassroom.bu.edu> . The product features live virtual classrooms that support audio, video, application sharing, and content display, enabling instructors to add vitally important elements of interaction that simply cannot be provided in a text-based course. The product can also be used to host online meetings, guest lectures, web casts, and meetings. Residents and faculty with the simple aid of a broadband internet connection in Dubai will join and participate in the classroom experience with their respective colleagues in Boston. This tool allows real time interaction, sharing educational material and fielding questions over the internet. This tool will be one of many tools BUIDRE will use to connect the Dubai campus to the Boston Campus.

Apreso Classroom (Echo 360) is part of the Web Casting definition. This product is hosted in Boston. It allows for capturing the classroom experience by videotaping the lecturing professor in combination with recording his or her presentation materials from their computer and finally publishing the whole classroom experience online for residents/faculty to view on-demand. Residents and faculty in Dubai will be provided access to the Web Casting system at Boston University, and with the simple aid of a broadband internet connection in Dubai they will be able to review and discuss with their faculty the lectures as presented in Boston. Therefore Echo 360 will be one of many tools BUIDRE will use to connect the Dubai campus to the Boston Campus.

CourseInfo (Blackboard) is a Web Conferencing and Web Casting Tool. It is hosted in Boston at <http://courseinfo.bu.edu>. Faculty uploads different types of course materials on CourseInfo including: syllabi, slides, audio and videos recordings including MP3 files, advanced lecture notes, course updates, quizzes, links to sites with related subjects. Course directors also facilitate and monitor CourseInfo discussion boards and help residents, independent of their location, learn through comprehensive and direct feedback from their teachers. Residents and faculty in Dubai will be provided access to CourseInfo at Boston University, and with the simple aid of a computer and an internet connection, they will be able to download, review, post their assignments and participate in the same discussion board as their peers and colleagues in Boston. Therefore, CourseInfo will be another of the many tools BUIDRE will use to connect the Dubai campus to the Boston Campus.

The Online Resident Evaluation and Performance System is a web-based system. It is hosted on a BUSDM server in Boston. Residents are given unique identifiers (username and password).

This web-based system allows a scheduled comprehensive evaluation of the resident's clinical competencies and proficiencies by his/her clinical faculty. Residents undergo self-evaluation on a quarterly basis. Faculty members evaluate residents' performance for the same period. Details analysis and summary reports are generated and reviewed by the faculty, and finally shared with the resident during the quarterly performance review.

Lexi-Comp

Boston University has purchased a site license for web based prescription drugs software. Residents and faculty of BUIDRE in Dubai are able to login and search for prescription drugs information through the entire database. Lexi-Comp (the vendor) continuously updates the database to ensure access to the most current drug information. Since the software is web-based (<http://www.crlonline.com>), residents have access to the site in school during treatment using their wireless laptops or fixed workstations, or from other remote sites using their laptops.

Electronic Clinical Information System

BUIDRE has implemented paperless clinical information software. One of the main objectives of the system is to deliver better patient care by creating a system of accountability for all stakeholders (faculty, residents and staff). The software is an enterprise paperless practice management and electronic patient record system designed for use by faculty, residents and staff. The software offers BUIDRE an opportunity to incorporate comprehensive treatment plans for patients. The treatment plan design is a key for faculty to better monitor residents' clinical education and progress towards clinical competency, and to ensure better continuation of patient care. Included in the software is the ability for BUIDRE to collect and store medical histories and diagnosis codes. The new comprehensive treatment plan combined with medical history, diagnosis codes and electronic patient record component will create an opportunity for researchers at BUIDRE to identify sound clinical cases for research. The system benefits patients by creating more efficient visits, better tracking of care, increased accuracy in coding for billing and reimbursement, ready access to patient information from any location and by better securing and protecting their electronic dental and medical records.

The system benefits residents by teaching them to better design comprehensive treatment plans, and benefits faculty by giving them immediate and comprehensive access to residents' clinical progress as to better guide them in their next procedures.

The system benefits administrators by giving them immediate access to better monitor residents and faculty activities, and to identify strengths and weaknesses in the education of residents and the delivery of patient care, and to better monitor the clinical operations and production.

B) Laptop requirement

Residents are required to own laptops to increase resident information technology literacy, prepare them for lifelong learning and familiarize them with computer applications available in dental clinics and dental practices.

Should their laptop require repair that will last an extended period of time, the school will provide the residents with a loaner until their laptop is repaired. Laptops must be equipped with Modem/Ethernet Combo to connect to the Internet, as well as a wireless network card.

Residents will use the laptop in school and at home to access their email, monitor their clinical progress towards competency, faculty's online instructions such as course syllabi, advanced lecture notes, quizzes, self-assessment tests and other electronic materials, conduct literature search, engage in asynchronous and synchronous distance learning and many other IT related applications.

C) Support and services

Residents are supported with computer technology in several ways. First, BUIDRE has its own state-of-the-art library. The library will be equipped with 12 data ports, 3 desk top computers with multimedia capabilities, a networked printer and copy machine. One computer will be connected to a color document scanner. The computers have the latest version of Microsoft Office, which offers MS Word for word processing, EXCEL for analyses and PowerPoint for presentations. Residents, faculty and staff will be able to access the Internet and email, prepare PowerPoint presentations, conduct literature searches, and perform data analyses. There is an IT help desk within BUIDRE (ground floor).

Residents at BUIDRE are given Boston University Kerberos and email accounts. Kerberos is a secure and encrypted username password account. Each class has a listserv for better collaboration and communication among residents, faculty, and staff. The Kerberos account will grant residents access to the Boston University Alumni Medical Library, and its e-resources (see website address at <http://med-libwww.bu.edu/>) including shared, internal and external research databases, journals, articles and a wealth of information. In addition, the resources of the Maktoum Harvard Medical Library will be available to BUIDRE's residents.

BUIDRE's academic space consists of a lecture hall with a capacity of 40, two large seminar rooms each with a capacity of 14 and three small conference rooms each with a capacity of 6. All rooms will be equipped with wireless internet access, and audiovisual projection capabilities. Secure wireless technology is available in the classrooms, library and many other locations in the building. Wireless allows for better collaborations and access to services by residents, faculty and staff.

Availability of Information Technology and Other Resources

We will use all reasonable efforts to maintain the availability and quality of all information technology and other resources, but we recognize that interruptions, delays, errors, and other problems may occur. We also recognize that changes will occur in information technology and other resources from time to time. We will strive to correct problems, make improvements, and minimize disruptions, but we can make no guarantees.

Policy on Computing Equipment, Listservs, and WebPages

Residents of BUIDRE have access to the Boston University information system and will have Boston University e-mail accounts. In addition to Boston University's *Conditions of Use and Policy on Computing Ethics* (<http://www.bu.edu/computing/ethics>), the Boston University Institute for Dental Research and Education Dubai expects individuals using BUIDRE and DHCC computing services to follow the additional guidelines set-forth.

Computing Equipment and Facilities at BUIDRE

Computing equipment owned by BUIDRE must display standard Windows backgrounds at all times. Screensavers and software not provided by BUIDRE may not be downloaded or installed.

Listserves at BUIDRE

Listserves are to be used to broadcast BUIDRE and DHCC related business **only**. This is limited to messages sent from the administration and BUIDRE endorsed organizations. It is **not** a mechanism for non-BUIDRE related discussion, religious announcements, chain letters, commercial endorsements or advertisements.

WebPage Access at BUIDRE

Residents, Faculty and Staff may not post their “personal” web pages via the BUIDRE server. Web Page posting is for the exclusive use of BUIDRE related business.

BUIDRE reserves the right to revoke the computing privileges and/or discipline any individual using the Computing Equipment, Listserves, or Web Pages in violation of this or any other policy relating to the use of computer resources.

Alumni Affairs Policy

The alumni of the BUIDRE are an important part of the Boston University and Dubai Health Care City community and remain a critical resource for the success of our future graduates.

The Manager of Resident Services at BUIDRE will be responsible for overseeing the alumni program which will include the following components: an alumni webpage, career network, continuing education courses, alumni events, alumni clubs, and giving programs. The Manager of Resident Services will be responsible for tracking addresses, location, occupation, continuing education of graduates as well as coordinating alumni surveys.

To establish an alumni club, interested residents must submit a mission statement to the Manager of Resident Services at the beginning of the academic year (by July 31). Included with the mission statement should be a general overview of proposed activities associated with the club. Alumni clubs are encouraged to develop acceptable protocols for fundraising and alumni club events and to provide for ongoing club expenses. Proposals of alumni clubs must be reviewed and approved by the Chief Academic Officer.

Alumni surveys will be distributed in August of each calendar year. We anticipate alumni data to assist in the evaluation of BUIDRE's institutional effectiveness and advancement plans.

Faculty Roster

Full time:

Steven M. Morgano, Chief Academic Officer; Professor of Prosthodontics; Diplomate, American Board of Prosthodontics

Sami Chogle, Associate Professor of Endodontics; Diplomate, American Board of Endodontics

Dina Debaybo, Assistant Professor of Pediatric Dentistry; Diplomate, American Board of Pediatric Dentistry

Harold Goodis, Professor of Endodontics; Diplomate, American Board of Endodontics

Ram Grandhi, Assistant Professor of Orthodontics; Diplomate, American Board of Orthodontics

Manal Halabi, Assistant Professor of Pediatric Dentistry; Diplomate, American Board of Pediatric Dentistry

Mohamed Koutrach, Assistant Professor of Prosthodontics; Diplomate, American Board of Prosthodontics

Rasha Al-Mubarak, Assistant Professor of Orthodontics; Diplomate, American Board of Orthodontics

Visiting from Boston:

Wendy Cheney, Associate Clinical Professor of Pediatric Dentistry; Director, Postdoctoral Program in Pediatric Dentistry

Serge Dibart, Professor of Periodontology and Oral Biology; Clinical Director, Postdoctoral Program in Periodontology

Victor S. Dietz, Associate Clinical Professor of Orthodontics; Director, Postdoctoral Program in Orthodontics

Christopher V. Hughes, Associate Professor and Chairman, Department of Pediatric Dentistry

Jeffrey W. Hutter, Dean and Professor of Endodontics

Dan Nathanson, Professor and Chairman, Department of Restorative Sciences and Biomaterials

Frank G. Oppenheim, Professor and Chairman, Department of Periodontology and Oral Biology

Ramzi Sarkis, Assistant Professor, Department of Endodontics; Director of Educational Planning, Office for Advanced Education and International Programs

Thomas E. Van Dyke, Professor of Periodontology and Oral Biology; Director, Postdoctoral Program in Periodontology; Director, Clinical Research Center

Accreditation

The Advanced Education Programs are accredited by the United Arab Emirates Ministry of Education, Commission for Academic Accreditation.

These programs follow the standards established by the Commission on Dental Accreditation (CODA) for advanced educational programs.

Currently, the CODA does not accredit international specialty programs. However, the Commission is considering revising this policy, and accreditation of international programs may be instituted in the future. Because the structure and curriculum of the program parallel that of the accredited program in Boston, the program is already prepared to apply for accreditation without any alterations if the CODA changes its policy and begins international accreditation of specialty programs.