UNIVERSITY OF LOUISVILLE

PROPOSAL FOR CERTIFICATE PROGRAMS OF LESS THAN 24 HOURS
OF UNIVERSITY CREDIT [NOT REQUIRING COUNCIL ON
POSTSECONDARY EDUCATION (CPE) APPROVAL]

School of Dentistry Postgraduate Certificate Programs

Title of Certificate

School of Dentistry

Unit Submitting Proposal

School of Dentistry

Department

January 1, 2010

Proposed Starting Date

Dentistry

Academic Major

Melanie R. Peterson, DMD, MBA

Certificate Program Coordinator

Approved by

Board of Trustees on

President:

Signature

Date
Program Title: School of Dentistry Postgraduate Certificate Programs

Implementation: The endodontic, orthodontic, pediatric dentistry, and periodontics specialty programs are well established programs at the School of Dentistry. These programs have operated over the years as certificate programs administered through the School of Dentistry. This proposal seeks to transition them to certificate programs that will be recognized through the University; this transition better represents the function of the programs and provides financial aid eligibility for enrolled residents.

Although each of these programs qualifies for certificate status they follow different models in terms of tuition, stipends, and program fees. These differences arise from the degree of competition for admission to each program. A program that is very competitive may charge tuition and elect not to pay a stipend while a less competitive program may be compelled to offer a stipend in order to attract the best candidates. This situation is a national phenomenon related to the earning potential of each specialty. A certificate is required for completion in all four programs. In addition, the MS in Oral Biology degree is optional for residents in the Endodontics, Orthodontic and Pediatric Dentistry programs. However, residents in the Periodontics Program are required to complete the MS in Oral Biology degree in order to be eligible for the certificate.

Specific program information is as follows:

**Endodontics** – A certificate in Endodontics is awarded at the completion of the program. In addition, the MS in Oral Biology degree is optional.

**Orthodontics** – A certificate in Orthodontics is awarded at the completion of the program. In addition, the MS in Oral Biology degree is optional.

**Pediatric Dentistry** – A certificate in Pediatric Dentistry is awarded at the completion of the program. In addition, the MS in Oral Biology degree is optional.

**Periodontics** – A certificate in Periodontics is awarded at the completion of the program. Residents in the Periodontics Program are required to complete the MS in Oral Biology degree.

**Program Fees**

At one time, funding to support faculty supervision and other expense was available through the federal Graduate Medical Education (GME) program for non-hospital based residency programs; for Dentistry, this funding was received for the Periodontics, Endodontics and Orthodontics residency programs. That funding program ceased as of October 1, 2003 and was phased out over a subsequent three-year period. In 2004, the School of Dentistry requested that a $5,000 program fee be initiated for residents in those three programs, to help offset the intensive faculty supervision needed for these residents while they treat patients in the clinics. On June 24, 2004, the Board of Trustees approved these program fees, along with an approval that these fees would be returned to the School of Dentistry.

Program specific information is outlined below:

**Endodontics: CIP 60.0103**

Residents are charged tuition and fees at the graduate rate with an annual program fee of $5000. They are also charged the student health fee and student health insurance.
University of Louisville School of Dentistry
Certificate Proposal: Graduate Endodontics, Orthodontics, Pediatric Dentistry, Periodontics

Length of program: 2 years

Course #: PEDH-900-91
       PEDH-900-92

Orthodontics: CIP 60.0105
Residents are charged tuition and fees at the graduate rate with an annual program fee of $5000. They are also charged the student health fee and student health insurance.

Length of program: 2 years

Course #: OPGD-900-91
       OPGD-900-92

Pediatric Dentistry: CIP 60.0106
Residents receive a stipend of $35,000. Residents are charged tuition although tuition remission is applied in full. Residents pay the annual program fee of $5000. They are charged the student health fee and receive UofL Employee Health Insurance.

Length of program: 2 years

Course #: OPGD-910-91
       OPGD-910-92

Periodontics: CIP 60-0107
Residents are charged tuition and fees at the graduate rate with an annual program fee of $5000. They are charged the student health fee and student health insurance. The Masters in Oral Biology is required for completion of the program.

Length of Program: 3 years

Course #: PEDH-910-91
       PEDH-910-92
       PEDH-910-93

I. EDUCATIONAL OBJECTIVES AND RATIONALE

The primary objective of each of these residency programs is to provide additional training for graduates of DMD/DDS programs in specialized areas where treatment complexity mandates a higher level of expertise. Between 1998 and 2006 the ratio of specialists remained stable in Kentucky despite an increase in the absolute number of dentists and an overall 2% increase in the population. Nationally there is a projected shortage of dentists as evidenced by the fact that five new dental schools are in the planning stages at the current time. Financial constraints will make it difficult for these new schools to expand to the point where they can offer residency programs, therefore it is essential for existing programs to flourish in order to meet the continuing demand for specialists. Many general dentists depend upon an adequate supply of specialists to whom they can refer patients with conditions that exceed their abilities. For this reason specialists have excellent prospects for employment.
The existence of these programs is consistent with the University mission to prepare graduates for responsible citizenship and for success in their chosen professions. Oral health continues to be problematic for Kentucky as evidenced by the fact that the State has the distinction of ranking first nationally in the number of people having no natural teeth. Many studies have been done linking the connection between oral and systemic health and emphasizing that the mouth is “the gateway to the body”. It is essential that dentists, physicians and other healthcare workers collaborate in an interdisciplinary manner to emphasize prevention and overall health. Residents who pursue the MS in Oral Biology degree spend time doing research in an area of their choice, thus supporting the mission of the University in maintaining scholarship, research and pursuing critical thinking. Residents also provide some degree of instruction for the DMD program. This coverage is extremely important in view of the fact that a faculty shortage for DMD/DDS programs has been a problem both locally and nationally. These programs also provide a reservoir for potential faculty who may be interested in academic careers. Specialty programs provide for the referral of complex cases that are beyond the skill level of DMD students.

II. PROGRAM DESCRIPTION

2.1 Admission

Endodontics: All applicants must be graduates from an institution accredited either by the Commission on Dental Accreditation or the Commission on Dental Accreditation of Canada. Applicants must submit the following documents to the program director: Application form, official transcript of all previous college and dental school grades, recommendations from three persons well acquainted with applicant’s abilities, recent photograph, National Board Scores, and a $50 non-refundable fee. If applicable, those for whom English is a second language must also take the TOEFL examination and submit those scores. Interview selection is determined by the program director with input from program faculty. Applicant selection is determined by National Board scores, GPA (college and dental school), clinical experience in both general dentistry and clinical endodontics, history of postgraduate training or practice experience, letters of recommendation, and the interview. Interview criteria include communication skills, motivation, maturity, and compatibility with residents and faculty. Three applicants are selected each year for a total of six residents in the program.

Orthodontics: All applicants must be graduates from an institution accredited either by the Commission on Dental Accreditation, the Commission on Dental Accreditation of Canada, or be graduates of foreign dental schools who possess equivalent educational background and standing as determined by the School of Dentistry and the program. The following documentation is required for all applicants: National Board Scores, GPA, research and clinical experience, letters of recommendation and TOEFL, if indicated. A score of 213 or higher is required for the TOEFL. A Selection Advisory Committee made up of one or two full-time faculty and one or two part-time faculty review and screen applications using guidelines established by the department chair. Informal input is solicited from designated class representatives. The Committee reviews the applications and submits a list of 20-25 applicants to be interviewed, after which time they are rank ordered from most to least qualified; these names are then
submitted to the National Matching Service. In February of each year all interviewed candidates are accepted (or not) based upon a match between the rank order of the program with the rank order of the applicant. Seven applicants are accepted each year for a total of fourteen residents in the program.

**Pediatric Dentistry:** All applicants must be graduates from an institution accredited either by the Commission on Dental Accreditation, the Commission on Dental Accreditation of Canada, or be graduates of foreign dental schools who possess equivalent educational background and standing as determined by the School of Dentistry and the program. Interview decisions are based on GPA, National Board Scores, personal statements, and letters of recommendation. The faculty decides who is academically qualified and should be interviewed. All interviews are completed by program faculty and residents, after which time the applicants are ranked and submitted to the National Matching Service as described above. The program also participates in the Postdoctoral Application Support Service (PASS) which is administered through the American Dental Education Association (ADEA). PASS acts as a clearinghouse for applicants by collating all application documents and forwarding them to all programs to which the candidate applies. Three applicants are accepted each year for a total of six residents in the program.

**Periodontics:** All applicants must be graduates from an institution accredited either by the Commission on Dental Accreditation, the Commission on Dental Accreditation of Canada, or be graduates of foreign dental schools who possess equivalent educational background and standing as determined by the School of Dentistry and the program. Criteria for interview selection rests with the program director and faculty after applications are received from PASS. Factors considered are class rank, National Board Scores and GPA. Candidate acceptance is based on these factors in addition to the strength of the interview. Acceptance decisions are made by the program director and faculty with input from the residents. Three applicants are accepted per year for a total of nine residents in the program.

### 1.2 Curriculum

The Endodontic, Orthodontic, Pediatric Dentistry and Periodontic programs share a group of core courses that are described below. Note that all core courses are not required for each program. The program-specific core courses are provided in *Appendices 1 and 2*.

**Advanced Clinical Pharmacology (OBIO-0635-615)** 1 Hour

To appropriately identify the indications for, and prescribe, medications used most commonly in dentistry, pharmacologically manage primary oral mucosal diseases and secondary mucosal disorders arising from drug reactions, to anticipate and diagnose drug interactions based on the patient’s medication regimen and clinical signs.

**Oral Biology Seminar (OBIO-0635-606)** 1 Hour
To become familiar with presenting and defending personal research findings in a scientific setting.

Advanced Head and Neck Anatomy (ASNB 675) 2 Hours

To review the gross anatomic relations of the head and neck, practice techniques, facilitate knowledge and develop skills pertinent to specialties on cadaveric specimens, assess anatomical knowledge and its application in the practice of dentistry.

Concepts in Immunology (OBIO-0635-600) 4 Hours

To provide an in-depth analysis of how the host’s immune system within the oral cavity is involved in mediating host immunity against periodontal pathogens, as well as defining the immunological events underlying the initiation and progression of periodontal diseases. Prerequisite: Basic Immunology

Advanced Oral Pathology (OBIO-0635-617) 1 Hour

To build upon previous knowledge of oral pathology so that residents will be prepared to clinically assess and manage oral pathoses in their area of specialization and in general.

Biomedical Data Analysis (OBIO-0635-601) 3 Hours

To develop a conceptual understanding of statistical techniques and procedures, use the SPSS statistical package to summarize and analyze data, and to acquire the knowledge to interpret data analysis findings and explain the findings to other health care professionals.

Introduction to Oral Biology Research (OBIO-0635-601) 1 Hour

To gain an understanding of research design, how to evaluate the dental literature, clinical trials, protection of human subjects in biomedical research, research ethics, and presentation of research findings.

Diagnosis and Oral Medicine (OBIO-0635-614) 1 Hour

To present to graduate students advanced topics on diagnostic methods and therapy relative to oral-maxillofacial and systemic diseases, as well as the interrelationships between oral and systemic disease.

Craniomaxillofacial Diagnostic Imaging (OBIO-0635-612) 2-4 Hours

To prepare the student to comprehend principles of interpretation and image-guidance for current diagnostic imaging modalities used to image the craniomaxillofacial complex.
The Diagnosis and Treatment of Temporomandibular Disorders and Facial Pain (OBIO-0635-613) 1 Hour

To allow residents to understand the terminology of occlusion and how occlusal morphology is affected by various determinants of mandibular movement, understand pathologic occlusions and treatment of such conditions, diagnose and treat temporomandibular disorders.

**Endodontics:** The didactic portion of the endodontics curriculum explores the biomedical sciences upon which modern endodontics is based. These include anatomy, immunology, microbiology, statistics, among others, and a comprehensive review of the endodontic literature. Additionally, an attempt is made to review approximately three textbooks related to endodontics during each year of the program. The clinical portion of the program is extensive with past residents completing an ample number of cases. Case review is conducted weekly with residents presenting all their cases to attending faculty and fellow residents. Each resident is involved in clinical teaching with the pre-doctoral clinic for \( \frac{3}{4} \) day per week. Additionally, they are asked to present lectures and lead seminars for the other residents. A significant research project is required and oral and written examinations are given twice yearly. The M.S. in Oral Biology program is optional for all residents.

Residents spend program time as follows:

- **Didactics:** 25.05%
- **Clinical:** 55.13%
- **Research:** 10%
- **Teaching:** 9.82%

An example of the full curriculum for both years is located in Appendix 3.

**Orthodontics:** The Graduate Orthodontics Program at the University of Louisville School of Dentistry is a 24-month program consisting of didactic, clinical and research training. Graduates of the program receive a Certificate in Orthodontics. The program is approved and accredited by the Council on Dental Education of the American Dental Association. An optional program, managed through the School of Interdisciplinary and Graduate Studies of the University of Louisville can lead to a Master’s Degree by fulfilling additional requirements during orthodontic training or an additional six months, if needed.

Residents spend program time as follows:

- **Didactics:** 25.00%
University of Louisville School of Dentistry
Certificate Proposal: Graduate Endodontics, Orthodontics, Pediatric Dentistry, Periodontics

Clinical: 55.00%
Research: 10%
Teaching: 5%
Lab 5%

An example of the full curriculum for both years is located in Appendix 4.

Pediatric Dentistry: The Department of Orthodontic, Pediatric, and Geriatric Dentistry offers a 24-month certificate program and/or a 36-month certificate/master's degree program in graduate pediatric dentistry beginning July 1 of each year.

The program has received initial accreditation from the Commission on Dental Education of the American Dental Association. It is designed to prepare residents for the career track of their choice—academics, research or practice—and to encourage and prepare the resident for board certification by the American Board of Pediatric Dentistry.

The pediatric dentistry program provides didactic and clinical training leading to a certificate as a specialist in pediatric dentistry (24 months) and an optional master's degree in oral biology (36 months).

The Department of Orthodontics and Pediatric Dentistry offers a 24-month certificate program and/or a 36-month certificate/master's degree program in graduate pediatric dentistry beginning July 1 of each year. An example of the full curriculum for both years is located in Appendix 5.

Residents spend program time as follows:

Didactics: 23.00%
Clinical: 70.00%
Research: 6%
Teaching: 1%

Periodontics: The goal of the graduate program in periodontics at the University of Louisville is to develop skillful clinicians and researchers for careers in academics and/or periodontal practice. Excellent training in clinical, research and teaching skills is essential to equip tomorrow's specialists with the proper scientific background to deal with the changes and challenges inherent in a profession undergoing rapid scientific advancement.
University of Louisville School of Dentistry  
Certificate Proposal: Graduate Endodontics, Orthodontics, Pediatric Dentistry, Periodontics

Residents are exposed to a wide variety of clinical techniques by a group of highly qualified faculty with diverse training and varied backgrounds. The philosophy of the program is that clinical excellence is based on technical proficiency, expert diagnostic skills and broad based knowledge of the periodontal literature.

The didactic portion of the curriculum explores in depth the biomedical sciences upon which modern periodontics and periodontology are based. Instruction in anatomy, biochemistry, oral biology, microbiology and immunology are integral parts of the basic science curriculum offered. The M.S. in Oral Biology degree is required for completion of the program.

Residents spend program time as follows:

- Biomedical Sciences: 35.00%
- Clinical: 54.00%
- Research: 6.00%
- Teaching: 3.00%
- Hospital Rotations: 2.00%

An example of the full curriculum for all three years is located in Appendix 6.

1.3 EXPERIENTIAL COMPONENTS

Clinical activity is a hallmark of each residency program and the majority of this activity occurs within the School of Dentistry. All residency programs collaborate with each other if a patient treatment plan dictates expertise from one of the other programs. An example is when endodontic residents collaborate with pediatric dentistry residents to provide treatment in the operating room for patients who require general anesthesia.

2.4 ACCREDITATION/CERTIFICATION

Each residency program is accredited by the Commission on Dental Accreditation of the American Dental Association.

Commission on Dental Education

211 East Chicago Avenue

Chicago, IL 60611
University of Louisville School of Dentistry  
Certificate Proposal: Graduate Endodontics, Orthodontics, Pediatric Dentistry, Periodontics

Specific accreditation standards are prescribed for each residency program and evidence that the standards are being met occurs every seven years through a site visit of peers with significant knowledge of each program discipline.

2.5 EVALUATION

The Council on Dental Accreditation requires outcomes for each program. These outcomes are located in Appendices 7, 8, 9, and 10.

III. ADMINISTRATION OF CERTIFICATE PROGRAMS

Certificates are currently awarded by each residency program within the School of Dentistry.

Documentation of residents who have completed each program is maintained by the departments and by the registrar located in the Dean’s Office. After approval of these certificate programs, the record of the certificate will be contained within each individual’s official University transcript.

IV. RESOURCES

4.1 RESOURCES REQUIRED

Within the next few weeks the School of Dentistry will embark upon an extensive two year renovation of the entire facility. The resources enumerated below for each program describe the current facilities.

After the renovation all four of these residency programs will be located on the same floor and will occupy a state-of-the-art facility that will include conference rooms and full capability for an electronic health record including digital radiography. Location of these residency programs adjacent to each other will allow for enhanced collaboration and economies of scale. The number of post-renovation operatories will allow some space for DMD students as well. The total number of operatories will be as follows: Endodontics (15), Orthodontics (21, including Faculty Practice), Pediatric Dentistry (14) and Periodontics (16).

Endodontics: Clinical facilities currently include six operatories and a dedicated sterilization area. The clinical area has appropriate support facilities and storage. Lecture halls and conference rooms are available on a scheduled basis and are primarily located within the dental school. Instruments and supplies are provided through the central sterilization system. Digital radiographic sensors are available for each resident along with a computer in each operatory.

The table below indicates faculty who work with the program more than one half day/week.

<table>
<thead>
<tr>
<th>Name</th>
<th>Discipline/ Specialty</th>
<th>Board Status (If Specialist)</th>
<th>Hours Per Week</th>
<th>Weeks Per Year</th>
<th>Assignments*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clark, S.</td>
<td>Endodontics</td>
<td>Certified</td>
<td>40</td>
<td>52</td>
<td>SC, T, PA</td>
</tr>
<tr>
<td>Program Director</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caicedo, R.</td>
<td>Endodontics</td>
<td>Ed. Qualified</td>
<td>40</td>
<td>52</td>
<td>SC, T</td>
</tr>
<tr>
<td>Morelli, J.</td>
<td>Endodontics</td>
<td>Certified</td>
<td>32</td>
<td>52</td>
<td>SC, T</td>
</tr>
</tbody>
</table>

9
University of Louisville School of Dentistry
Certificate Proposal: Graduate Endodontics, Orthodontics, Pediatric Dentistry, Periodontics

| Gray, R.   | Endodontics | Ed. Qualified | 4   | 36   | SC |
| Childers, M. | Endodontics | Ed. Qualified | 4   | 52   | SC, T |
| Shuler, S.  | Endodontics | Certified     | 4   | 50   | SC |

*Assignments

- SC – Supervision of residents in clinic
- T – Teaching Didactic Sessions (lectures, seminars, courses)
- PA – Program Administration

Orthodontics: The orthodontic clinic has undergone a recent upgrade that includes the latest technology. There are fifteen patient chairs, a dedicated laboratory, radiographic room with digital equipment, conference room with three computers and a Resident Room equipped with four computers and a color printer. Faculty resources are located in Appendix 11.

Pediatric Dentistry: The Pediatric Clinic has also recently undergone an upgrade. It contains fourteen dental chairs with six quiet rooms that are equipped with nitrous oxide. Faculty resources are listed below.

a. Ann Greenwell:
   i. Program/Division administrative duties
   ii. Cover resident patient care in the clinic 3 days per week (6 half days/week)
   iii. Cover resident patient care in the OR at Kosair 1.5 days per week (3 half days/week)
   iv. Cover resident patient care in the OR at the UofL Outpatient Care Center (new FPP building)
   v. Course director for Pediatric Residency courses:
      1. Contemporary Pediatric Dentistry
      2. Current Literature Review
      3. Core Literature Review
      4. Orthodontic Seminar
      5. Case Presentations
   vi. Course Director for Graduate Growth and Development for Pediatric and Orthodontic residents.
   vii. Supervise Multi-disciplinary Seminar presentation preparation
   viii. Lecture in DMD Growth and Development course – 5 lectures
   ix. Lecture to Dental Hygiene Students – 2 lectures
   x. Coordinate Dental Hygiene Pediatric Rotation and Shadowing
   xi. Lecture to Freshman Introduction to Dentistry Course – 1 lecture
   xii. Mentor research projects of residents, including IRB requirements (currently working with 4 of 6 residents)
   xiii. Mentor Masters in Public Health students (2 students ’07-’08, 2 students in ’08-’09, 2 students ’09-’10)
   xiv. Community Service: Smile KY!, Special Olympics, WHAS Health Fair, other community health fairs
University of Louisville School of Dentistry
Certificate Proposal: Graduate Endodontics, Orthodontics, Pediatric Dentistry, Periodontics

xv. Kosair Children’s Hospital Chief of Pediatric Dentistry
   6. Executive Committee meeting (monthly meeting)
   7. Surgical Care Committee (monthly meeting)

vi. ULSD Committees:
   1. Postgraduate Affairs Advisory Committee
   2. Dean’s Chair Review Committee 2009

vii. Grant writing, management:
   1. Crusade for Children
   2. Smile KY! follow-up treatment
   3. Flanagan’s/Student’s Grant

b. Betty Hajishengallis:
   i. Cover resident patient care in the clinic 3 days per week (6 half days/week)
   ii. Cover resident patient care in the OR at Kosair 1.5 days per week (3 half days/week)
   iii. Mentor resident research projects, including IRB requirements (currently working with 2 of 6 residents)
   iv. Mentor DMD research projects with DMD students
   v. Personal research 1 day/week
   vi. Lecture to residents, DMD Pediatric Dentistry Classes
   vii. Course Director, DMD Growth & Development course
   viii. Community Service: American Health Fair
   ix. ULSD Committees:
       1. Grievance Committee
       2. Research Committee for MS program

c. Priscilla Bond:
   i. Cover resident patient care in the clinic 1 day per week (2 half days/week)

d. Chris Baker
   i. Cover resident patient care in the clinic 1 day per week (2 half days/week)
   ii. Lecture to the residents on orthodontic treatment

Periodontics: The current facilities and faculty resources available for periodontics are located in Appendices 12 and 13.

Letters of support and curriculum vitae are located in Appendices 14 and 15

4.2 Budget Request

Please see attached budget and addendum page.

Appendix 16: Budget