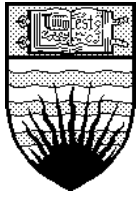


# THE UNIVERSITY OF BRITISH COLUMBIA



1 May 2008

## SENATE CURRICULUM & ADMISSIONS COMMITTEES

c/o Enrolment Services

2016 - 1874 East Mall

Vancouver, B.C. Canada V6T 1Z1

Tel: (604) 822-9952 Fax: (604) 822-5945

christopher.eaton@ubc.ca

To: Senate

From: Senate Curriculum & Admissions Committees

**Re: New Program: Master of Dental Science / Diploma in Endodontics**

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Our Committees have reviewed the attached proposal from the Faculty of Dentistry, and are pleased to recommend the following to Senate:

*"That Senate approve the Master of Dental Science / Diploma in Endodontics program and its associated courses as set out in the attached report."*

Further, the Senate Curriculum Committee understand that there have been substantial discussions at and between the Faculties of Dentistry and Graduate Studies regarding the disciplinary faculties offering graduate degrees with research theses components. There is already such a situation with the Master of Dental Science / Diploma in Periodontics program, and the Endodontics program is similarly structured.

The Committee does not feel that the debate that has ensued is reason to delay approval of this program – as it meets the criteria for academic approval in the eyes of the Committee – but does believe that the current policy under which this arrangement is allowed could use some review and possible improvement. As such, the Curriculum Committee recommends the following to Senate:

*"That Senate direct the Academic Policy Committee to consider the matter of research thesis-based graduate programs being offered by the disciplinary faculties under the provisions of the Senate policy entitled "Optional Transfer of Professional Graduate Programs from the Faculty of Graduate Studies to the Disciplinary Faculties" and to make recommendations to Senate on any improvements to that policy if needed."*

# THE UNIVERSITY OF BRITISH COLUMBIA



Enrolment Services  
Senate and Curriculum Services  
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2 May 2008

To: Vancouver Senate  
From: Senate Curriculum Committee  
Re: **NEW GRADUATE PROGRAM**

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Attached please find submitted category 1 curriculum proposals from the Faculty of Dentistry in support of the Master of Dental Science/Diploma in Endodontics for your consideration.

## **New Program**

Master of Dental Science/Diploma in Endodontics (M.D.Sc./Dip.Endo)

## **New Courses**

DENT 578 (6) Endodontic Literature Review I  
DENT 584 (6) Endodontic Literature Review II  
DENT 504 (1) Endodontic Microsurgery  
DENT 505 (1) Dental Traumatology  
DENT 591 (1) Endodontic Case Management I  
DENT 592 (1) Endodontic Case Management II  
DENT 594 (5) Endodontic Case Review and Treatment Planning I  
DENT 595 (5) Endodontic Case Review and Treatment Planning II  
DENT 596 (5) Endodontic Case Review and Treatment Planning III  
DENT 721 (8) Clinical Endodontics, Year I  
DENT 722 (8) Clinical Endodontics, Year II  
DENT 724 (6) Clinical Endodontics, Year III

PROPOSAL FOR THE  
COMBINED MDS<sub>c</sub>/DIPLOMA  
IN ENDODONTICS GRADUATE PROGRAM

FACULTY OF DENTISTRY  
UNIVERSITY OF BRITISH COLUMBIA

2008

Dr. Edward Putnins, Associate Dean, Research and  
Graduate/Postgraduate Studies

Dr. Markus Haapasalo, Acting Head, Dept. of Oral Biological and  
Medical Sciences, Head, Division of Endodontics  
Dr. Jeff Coil

# **Proposal for a Graduate Program in Endodontics**

**TO:** Members - Faculty of Dentistry, UBC

**DATE:** November 30, 2007

## **I. General Information**

### **Accreditation**

This is a graduate specialty program and students that successfully complete the program are eligible for the Royal College Exam to practice the specialty in endodontics.

Required documentation of the Graduate Program in Endodontics will be produced and presented to the Commission on Dental Accreditation of Canada.

Program Title:	Graduate Training in Endodontics
Degree Title:	Masters of Dental Science (M.D.Sc.)
Diploma Title:	Diploma in Endodontics (Dipl. Endodontics.)
Department:	Oral Biological and Medical Sciences
Division:	Endodontics
Anticipated Date of Implementation:	September 2008
Proposed by:	Dr. M. Haapasalo and Dr. J. Coil

## **II. Need for the Program**

### **1. Justification for the Program**

**1) Endodontics as a Specialty.** Endodontics is recognized in Canada, USA and many other countries throughout the world as the dental specialty concerned with the diagnosis, prevention and treatment of pulpal and periapical pathosis. In North America there are currently 50 advanced endodontic programs offered. All except one are in USA. The only Canadian university to offer specialist training in endodontics is the University of Toronto. Therefore, the great majority of Canadian endodontists in clinical, research and academic fields, have acquired their credentials at foreign institutions, particularly in USA. The Canadian Dental Association (CDA) and The College of Dental Surgeons of British Columbia (CDS of BC), along with all other provincial dental licensing authorities, recognize the specialty and, in cooperation with the American Dental Association, have a reciprocal arrangement for accrediting graduate endodontic training programs in North America.

**2) Epidemiological Aspects of Endodontic Diseases.** Epidemiological studies in various countries have shown that the prevalence of apical periodontitis, which is the most common endodontic diagnosis, ranges from 30 % to 70 % in individuals between the age of 20 and 60 years. The

frequency of affected teeth per individual varies from 2 % to 9 % of remaining teeth, depending on the geographical area and the age of the study population. In Canada alone this means endodontic treatment needs for tens of millions of teeth. With other endodontic diagnoses such as pulpitis, radicular cyst, internal and external root resorption, longitudinal tooth fractures and other dental trauma included, the treatment need is even greater. Ageing of the population together with improved dental health, which means that people keep their teeth longer, will further increase the need for endodontic treatment in the future. Despite suggestions that dental implants will reduce the need for endodontic treatment, there is no epidemiological data supporting such claim. On the contrary, increased wealth, which can clearly be seen as increase in crown and bridge work, may in fact create an increase in endodontic treatment need.

**3) Professional Collaboration between Graduate Endodontic Program and Endodontic Specialists of British Columbia.** Graduate program in endodontics is, similarly to undergraduate program, dependent on active collaboration with the local endodontic community, who are working mainly in private practices outside the university. The division of endodontics has received several signs and indications of good will from the local endodontists. A number of previous part-time faculty endodontists have expressed their interest to contribute to and help the faculty with the new graduate program in endodontics. The division of endodontics has recently initiated projects, partly together with other disciplines in the faculty of dentistry, where one of the goals is to maximize the benefits of graduate program by effective sharing of the cutting-edge know how through active use of digital media. This would allow for example part-time faculty members, who are involved merely in undergraduate education, to actively follow and communicate with the graduate program, including clinical seminars. See attached letter from the B.C. Endodontists Society (Appendix I).

**4) Graduate Programs in Endodontics in Canada.** The Dental Faculty at the University of Toronto offers the only graduate endodontic program in Canada, graduating three endodontists every year. Therefore, nearly all of the endodontists in Canada have had to attend American universities for their clinical training. In general, endodontic programs in the USA are focused on clinical training (Certificate Programs) alone with clearly less emphasis on research. As a result, the academic foundations of this specialty are less than optimal and are based largely on clinical traditions. To address this weakness, and in keeping with the mission of our University, that we propose a combined clinical training/research endodontic program at UBC, to “provide instruction, research and public service that contributes to the economic, social and cultural progress of the people of British Columbia and Canada”. The combination of research and clinical training will offer a unique perspective on the oral health of patients.

**5) Enrollment Projections.** As the need for endodontic treatment in an aging population expands, the practice opportunities alone in this province manifest a demand for the program. Currently (February 2008) there are 41 endodontists registered with the College of Dental Surgeons of BC. They practice mainly in Vancouver or Victoria, and many of them are close to retirement. There are between 20 and 40 positions for endodontists in the dental faculties and teaching hospitals across Canada. Therefore, a continuing demand in the future for endodontists is foreseeable, and it can be expected that UBC can attract graduate students, who value research training as an adjunct to endodontic practice or as a prerequisite to an academic career.

**6) Other Graduate Programs in the Faculty of Dentistry.** The Department of Oral Biological and Medical Sciences has a postgraduate program in Periodontology, Oral Medicine, Oral Pathology, and Oral Radiology. A program in Prosthodontics has been proposed. In addition, together with the Faculty of Graduate studies, Ph.D. and M.Sc. programs are available. The new graduate endodontic program will add another two students annually to the current group of ca. 25 graduate students in our Faculty.

The graduate program in periodontology in the same department will benefit immediately and most directly from a graduate program in endodontics. Currently, only limited endodontic treatment can be offered by undergraduate dental students. Most patients with complex endodontic problems must be referred away from the University to endodontists in private practice.

**7) Professional Collaboration between General Practitioners and Endodontic Specialists.** Based on data from epidemiological studies on the prevalence of endodontic diseases, it can be estimated that endodontic specialists in British Columbia, for example, could within one year address less than 1 % of the existing endodontic treatment demand. However, while most of the endodontic treatment today and also in the future, will be provided by general dental practitioners, there are increasing requirements for endodontic treatment at the specialist level. General dentists refer difficult cases to endodontists. "*Case Classification According to the Degrees of Difficulty and Risk*" and "*Standards of Practice*", published by the Canadian Academy of Endodontics, are available at "[http://www.caendo.ca/about\\_cae/standards.shtml](http://www.caendo.ca/about_cae/standards.shtml)". Ageing of the population together with a longer life expectancy of teeth is one of the factors increasing demand for collaboration between general dentists and endodontic specialists (hidden, obliterated root canals in crowned teeth with infection, e.g.). Moreover, general practitioners depend on endodontic specialists for continuing dental education. Dental Schools nationwide require endodontists for the undergraduate programs, research and CE programs. There are currently three endodontic graduates in Canada (Toronto) annually to fill the hundreds of clinical, academic and research positions.

**8) Effect on Undergraduate Education at the Faculty of Dentistry.** A new program in graduate endodontics will increase the demand for clinical instructors and teachers in seminars and other activities. Theoretically, this could create difficulties in finding enough part-time faculty staff and clinical instructors for undergraduate education, as the resources have to be shared. However, experience from other universities with parallel undergraduate and graduate programs in endodontics indicates that graduate endodontics has a great potential to function as a positive stimulation to undergraduate endodontics. Graduate endodontic programs have been shown to create a general increase of interest in the field resulting in progress and advanced quality in undergraduate program. The Division of Endodontics has initiated a project for creating a digital learning resource environment to facilitate synergism between undergraduate and graduate programs, and to ensure effective sharing of the educational benefits to all teaching staff in both programs.

## **2. Objectives**

The combined clinical training/research program in endodontics will:

- enhance the study and practice of endodontics
- attract dentists to a combined academic/clinical career
- improve the scholarly environment within the Faculty of Dentistry by broadening the research and clinical focus of the Faculty

- foster interdisciplinary clinical and laboratory research in the health and social sciences across campus
- ensure ongoing supply of mentors for Continuing Education Programs

The program will attract graduate students who have clinical experience in dental practice. It will offer research training leading to a Master of Dental Science degree (MDS) within the context of existing graduate programs plus clinical training leading to a Diploma in Endodontics from the Oral Biological and Medical Sciences. The course work in 500-level courses for the degree and for the diploma will accommodate the research and clinical objectives of the program. Two students will be accepted in each year of the three year program.

### **III. PROGRAM SPECIFICATIONS**

#### **1) Admission Requirements and Prerequisites**

Applicants must hold a D.M.D. degree or its equivalent and meet the entrance requirements of the Faculty of Dentistry. They will submit three letters of reference and a TOEFL score of 580 or better will be required of applicants from non-English speaking countries. Those who meet these minimum requirements will be interviewed by an Admissions Committee in the Department of Oral Biological and Medical Sciences, who will make the final selection based on clinical experience, scholastic achievement and interest in research and the academic field.

#### **2) Course Requirements**

Students are required to take eleven existing and twelve proposed courses in addition to the thesis. For information on these courses, see Table 1.

#### **3) Thesis for Master of Dental Science Degree, DENT 599**

The degree is based on course-work and a twelve-credit research thesis. Refer to Appendix II. This is an ongoing program in the Faculty of Dentistry.

#### **4) Examinations**

Courses will be evaluated individually and the thesis must be presented according to procedures and in the form described in the document "Thesis Requirements for the Combined MDS/Diploma in Endodontic Program". Each student will have an Advisory Committee to supervise both the clinical and research training, and to evaluate and approve a formal thesis proposal. Refer to Thesis Requirements document.

**NOTE:** Students are required to meet with their supervisory committee on a semi-annual basis and supervisors will complete a Supervisory Committee Summary Report. A copy of this report will be filed in the Graduate Studies office of the Faculty.

#### **5) Areas of Graduate Research**

The particular interests of the students will determine the area of research from the wide range of clinical and laboratory research currently in progress within the Faculty of Dentistry. Funded investigations are in progress within the Department of Oral Biological and Medical Sciences in Cell Biology, Biomaterials, Biochemistry, and Immunology, whilst others in the Faculty are investigating growth and development, biochemical, microbiological and radiological markers for oral diseases and function, oral implants and biomaterials.

**Table 1a. List of all courses in the Masters Endodontic Graduate program.**

Course	Master/ Diploma	Credit Value	Hours	Tutorial /Clinic	Year	Instructor
ANAT 548 (Directed Studies)	M	3	36	T	I	M. Doroudi
PCTH 548 (Directed Studies)	M	3	36	T	I	A. Goumeniouk
DENT 540 (Research Methods)	M	6	72	T	I	J. Aleksejuniene
DENT 571 (Cell Biology of Diseased and Healing Periodontium)	M	3	36	T	II	L. Häkkinen
DENT 544 (Advanced Topics in Microbiology)	M	3	36	T	II	D. Waterfield
DENT 599 (Master's Thesis)	M	12			I, II, III	Supervisor
		30	216			

**Table 1b. List of all courses in the Diploma Endodontic Graduate program.**

Course	Master/ Diploma	Credit Value	Hours	Tutorial/ Clinic	Year	Instructor
DENT 721 *	D	8	760	C	I	TBA
DENT 578 *	D	6	72	T	I	TBA
DENT 591 *	D	1	16	T	I	TBA
DENT 594 *	D	5	60	T	I	TBA
DENT 756 (Oral Radiology)	D	0	30	T	I	E. Orpe
DENT 543 (Adv. Occlusion and Articulation)	D	3	36	T	I	D. Tobias
DENT 595 *	D	5	60	T	II	TBA
DENT 504 *	D	1	12	T	II	TBA
DENT 722 *	D	8	760	C	II	TBA
DENT 584 *	D	6	72	T	II	TBA
DENT 592 *	D	1	16	T	II	TBA
DENT 555 (Oral Radiology)	D	2	24	T	II	L. Zhang
DENT 575 (Implant Therapy)	D	3	36	T	II	T. Irinakis
DENT 505 *	D	1	12	T	II	TBA
DENT 724 *	D	6	550	C	III	TBA
DENT 596 *	D	5	60	T	III	TBA
DENT 561a (Directed Studies)	D	2	24	T	III	TBA
Total		63	2600			

\*Denotes proposed new courses

See tentative timetables for years I, II, and III (Appendix VIII)

See Curriculum Consultation Request (Appendix IX a, b, and c)



#### **6) Special Requirements**

The dental operatories must accommodate the six students who will be present when the program is fully operational. The operatories must be equipped with modern equipment used in specialty level endodontics, including radiographic equipment, operating microscope with digital camera/video connection, and endodontic ultrasound devices. Sufficient support staff will also be necessary (See Appendix III).

### **IV. EXISTING COURSES DIRECTLY IDENTIFIED WITH THE PROGRAM AND NEW COURSES REQUIRED TO IMPLEMENT THE PROGRAM**

Currently there are eleven courses available and we propose twelve new courses to lay the foundation for clinical endodontics and related research.

#### **1) Existing Courses Directly Identified with the Graduate Program in Endodontics**

See Table Ia, page 6 for courses credited to the MDSc component of the program.

See Table 1b, page 6 for courses credited to the Diploma component of the program.

See Appendix II for the MDSc thesis.

#### **2) Summary of New Courses Required to Implement the Program**

**NOTE: Full course outlines are immediately attached.**

##### **DENT 578 Endodontic Literature Review I**

Description: A series of two-hour weekly seminars for the first year. Contemporary literature will be reviewed. Where possible, seminars will be conducted with graduate students from other disciplines.

Objectives: To review the current and classic literature on which contemporary clinical endodontics is based.

Content: Seminars will be conducted to review the research and the empirical evidence supporting the clinical practice of endodontics. Emphasis will be on current literature with a viable connection to the historical background of the discipline to allow a broader understanding of the topics. Students will be encouraged to relate their clinical experiences with the research observations reported in the literature and to explore research interests.

##### **DENT 584 Endodontic Literature Review II**

Description: A series of two-hour weekly seminars for the second year.

##### **DENT 504 Endodontic Microsurgery**

Description: A series of two-hour weekly seminars covering the theory and practice of endodontic microsurgery.

Objectives: To provide students with the theoretical basis and rationale for surgical endodontic treatment applying the recent advances in microsurgery.

Contents: Seminars will be conducted to give the students a thorough understanding of the principles and rational of modern endodontic microsurgery. The course will include lectures, seminars and simulation training in endodontic microsurgery.

Please letter from Dr. L. MacNeil, Associate Dean of Clinic Affairs, Appendix III.

### **DENT 505 Dental Traumatology**

Description: A series of two-hour weekly seminars covering the theory and practice of dental trauma and resorptions and their endodontic treatment.

Objectives: To provide students with the theoretical basis and rational for diagnostics, treatment planning and treatment of various cases of dental trauma and tooth resorptions.

Contents: Seminars will present in depth the contemporary knowledge about the dental trauma, including resorption of dental hard tissue (internal and external resorptions). Focus will be on the etiology, diagnosis and treatment of dental trauma and the etiology, pathogenesis, diagnosis and treatment of tooth resorptions.

### **DENT 591 Endodontic Case Management I**

Description: A series of two-hour weekly seminars covering clinical procedures, and preclinical laboratory exercises in all terms of year 1.

Objectives: To provide students with the theoretical basis and rational for the full range of endodontic treatment. After the course the student will be able to choose the correct and efficient treatment strategy in challenging cases of clinical endodontics.

Contents: Seminars will cover the entire field of contemporary endodontics with a special focus on modern endodontic technology and clinical endodontics.

### **DENT 592 Endodontic Case Management II**

Continuation of DENT 591 in year 2.

### **DENT 594 Endodontic Case Review and Treatment Planning I**

Description: A series of two-hour weekly seminars in all 3 terms of each of the 3 years to review clinical cases, assign cases to graduate students and to discuss various treatment options.

Objectives: To expose students to a wide variety of clinical cases and to discuss the biological and clinical rationale for patient management.

Contents: During the course the students will present the clinical cases and treatments of their own patients. During the seminar the students will present the treatment plans for their cases, argument for the choices that were made during the treatment, and evaluate the prognosis of the given and alternative treatment protocols. The students will also focus on making professional presentations.

### **DENT 595 Endodontics Case Review and Treatment Planning II**

Continuation of DENT 594 in year two.

### **DENT 596 Endodontics Case Review and Treatment Planning III**

Continuation of DENT 594 in year three.

## **DENT 721 Clinical Endodontics I**

Description: A series of three-hour clinics (4-6 per week), clinical teaching, and hospital rotations during all terms in year one.

Objectives: To expose students to a variety of advanced clinical endodontics cases.

Content: Students will, based on knowledge gained through literature review, Endodontic seminars and Case Review and treatment planning, treat clinical endodontic cases of all types (conventional and surgical).

## **DENT 722 Clinical Endodontics II**

As DENT 586 but in year two.

## **DENT 723 Clinical Endodontics III**

As DENT 586 but in year three.

# **V. CALENDAR STATEMENT**

Refer to Appendix IV.

The Department of Oral Biological and Medical Sciences offers postgraduate clinical training in endodontics (leading to a Diploma) in conjunction with a Master of Dental Science (M.D.Sc.) degree. All students are required to complete both the thesis-based degree and the clinical Diploma program. The combined program ordinarily will require a minimum of three years to prepare the student for clinical practice in endodontics and to provide experience in clinical research focused particularly on the needs of an aging population. It is anticipated that graduates will be eligible to sit the Fellowship Examination of the Royal College of Dentists of Canada and the Diplomate Examination of the American Board of Endodontists.

Applicants must hold a D.M.D. degree or its equivalent, supply three letters of reference and meet the entrance requirements of the Faculty of Dentistry. Fluency in English (TOEFL score of 580 or better) is required of all applicants. Suitable applicants will be interviewed by an Admissions Committee, comprised of 4 Faculty Members and 1 Graduate Student. Students accepting an offer of admission are required to pay a non-refundable deposit.

# **VI. ADMISSION PROCESS**

Admission is based on specific selection criteria which is readily available to advisors and applicants. Academic performance will not be the sole criterion. Admissions committees will consider non-academic criteria in the over-all assessment of applicants for admissions.

Candidates should be graduates from approved dental schools. The applicant's academic standing must be such that it gives reasonable assurance of the successful completion of the program. Several means will be used to evaluate the applicant's qualifications. Among these are personal recommendations, interviews, national board results, academic records and hospital residency or general practice experience. In the case of graduates whose primary language is not English, a language proficiency examination will be considered.

## **VII. PRESENT AND PROJECTED RESOURCES**

Thirty seven Faculty members share the responsibilities for Graduate programs, many of whom are already engaged in the faculty.

### **1) Qualified Faculty**

Currently there are 2 endodontists in the Division of endodontics (one full-time Professor and one full time Assistant Professor, both tenured). A third full-time position has been approved by Faculty Council (see letter from Dean – Appendix V), and 4-6 part-time (10-20%) faculty will be required to teach clinical and Literature Review courses.

### **2) Clinical and Research Facilities**

The new clinic (Nobel Biocare Oral Health Centre), which has been operating from fall 2006, was planned with sufficient space for students in specialist program in endodontics. Because of the specialized, partly heavy and expensive special equipment, which is constantly used in modern endodontic specialist training, specific operatories must be permanently allocated to this use. However, this does not prevent the use of the operatory by graduate students in other clinical disciplines.

Students will spend time also in the local hospitals and long-term care facilities for part of their clinical training. Moreover, there are several specialty clinics (e.g. Oral Implant Clinic; Mouth Mucosa Clinic; Temporomandibular Joint Clinic) within the Faculty of Dentistry that provide a varied and broad clinical exposure to other clinical disciplines. Patients will be charged professional fees for the clinical services provided by the graduate students to cover the cost of the clinics and other expenses associated with treatment.

No new laboratory facilities in addition to the existing facilities at the department of Oral Biological and Medical Sciences will be required for this program.

### **3) Library Resources**

An adequate selection of endodontic journals and contemporary textbooks is available already. No additional material will be required other than access to electronic library services (Scientific Journals) and some newer text books. See Library Curriculum Consultation (Appendix VI).

### **4) Administrative and Support Staff**

A CDA accredited program must provide sufficient support staff, supplies and equipment for the students. One secretary/receptionist and two dental assistants will be required for the program when fully operational. For the first and perhaps second year only two staff (one secretary/receptionist and one assistant) are required. The admissions to the program will be administered by the manager of Graduate Studies of the Faculty of Dentistry.

### **5) Budgetary Impact (Operating Income (per year) from six students)**

Professional fees will be based on 90% of the Federation of BC Dental Societies' General Fee Guide, and we estimate that each student will generate \$36,000 per year.

Tuition \$ 4,000, Program Fee \$ 23,000 per year per student.

Corresponding total fees in Toronto: 16,345 CAD (students must purchase their own microscope, cost 8,000 - 14,000 CAD); Oregon, US 19,418 USD for residents of Oregon and 25,084 USD for nonresidents.

### Summary (income)

	Professional Fees (Patients)	Program Fee 23,000	Total
Year I - 2 Students	72,000	46,000	118,000
Year II - 4 students	144,000	92,000	236,000
Year III - 6 students	216,000	138,000	354,000
Year IV - 6 students	216,000	138,000	354,000
Year V - 6 students	216,000	138,000	354,000

### Operating Costs (tentative)

	<i>Year I</i>	<i>Year II</i>	<i>Year III</i>
<i>1 additional full-time faculty (includes 15% for benefits)</i>	<i>0</i>	<i>117,000</i>	<i>119,000</i>
<i>Part-time clinical instructors</i>	<i>18,000</i>	<i>20,200</i>	<i>22,000</i>
<i>1 receptionist/CDA*</i>	<i>45,000</i>	<i>46,000</i>	<i>47,000</i>
<i>2 part-time CDAs* (in year II and III)</i>	<i>19,000</i>	<i>40,500</i>	<i>41,500</i>
<i>Materials and supplies</i>	<i>6,000</i>	<i>12,000</i>	<i>18,000</i>
<i>Instruments</i>	<i>8,000</i>	<i>10,000</i>	<i>15,000</i>
<i>Research expenses</i>	<i>2,000</i>	<i>10,000</i>	<i>25,000</i>
<i>Incidental expenses (copy, TST support, journals, visiting lecturers, etc.)</i>	<i>4,000</i>	<i>8,000</i>	<i>12,000</i>
<i>Total</i>	<i>102,000</i>	<i>263,700</i>	<i>299,500</i>

Please see letter from the Dean, Dr. C. Shuler (Appendix V).

Please see Budgetary Impact of Curriculum Proposals (Appendix VII).

\*Denotes Certified Dental Assistant

Rev. Apr. 9, 2008

## UBC Curriculum Proposal Form Change to Course or Program

**Category: (1)**

<b>Faculty: DENTISTRY</b> <b>Department:</b> <b>Faculty Approval Date: February 9, 2006</b>  <b>Effective Session 07W Term 1 Year 1 for Change</b>	<b>Date: March 10, 2008</b> <b>Contact Person: Dr. Markus Haapasalo</b> <b>Phone: 2-5996</b> <b>Email: markush@interchange.ubc.ca</b>
<b>Proposed Calendar Entry:</b>  <b>DENT 578 (6) Endodontic Literature Review I</b> Dental anatomy, morphology, endodontic instruments, diagnosis and differential diagnosis, etiology and pathogenesis of endodontic infections, and strategies of infection control. (2-0-0)	<b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To review the current and classic literature on which contemporary clinical endodontics is based. After the course the student is able to understand the theory and rational behind the current clinical endodontics. Further, the student will be able to i) have a detailed understanding about the morphology of the tooth root canal system and its impact on clinical endodontics, ii) have a detailed understanding of the structure and function of endodontic instrumentarium, iii) understand the challenges in endodontic research, iv) evaluate new techniques and concepts that are continuously introduced into the field of endodontics.
<b>Proposed Calendar Entry:</b>  <b>DENT 584 (6) Endodontic Literature Review II</b> Endodontic epidemiology, materials, prognosis of treatment, geriatric endodontics, complications, treatment resistant infections and endo-perio lesions. (2-0-0)	<b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To review the current and classic literature on which contemporary clinical endodontics is based. After the course the student is able to understand the theory and rational behind the current clinical endodontics. Further, the student will i) have a detailed understanding about the materials used in endodontic treatments, ii) understand the challenges of endodontic retreatment.

<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 504 (1) Endodontic Microsurgery</b> Treatment planning, instruments, techniques, materials, prognosis and evaluation of results. Lectures, seminars and simulation training. (1-1-0)</p>	<p><b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To provide students with the theoretical basis and rational for surgical endodontic treatment applying recent advances in microsurgery. After the course the student is able to understand the theory and rational behind the principles of endodontic surgical procedures.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 505 (1) Dental Traumatology</b> Dental trauma and tooth resorptions: etiology, pathogenesis, epidemiology, diagnosis and treatment. Lectures, seminars and simulation training. (1-1-0)</p>	<p><b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To provide students with the theoretical basis and rational for diagnosis and treatment of dental trauma and tooth resorptions. After the course the student is able i) to diagnose and understand the consequences of dental trauma, ii) diagnose internal and external tooth resorptions, iii) plan and commit the treatment of dental trauma and tooth resorptions, iv) evaluate the prognosis of the treatment of dental trauma and resorptions.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 591 (1) Endodontic Case Management I</b> Modern endodontic technology and clinical endodontics. Lectures, seminars and simulation training. (1-1-0)</p>	<p><b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To provide students with the theoretical basis and rational for the full range of endodontic treatment. After the course the student will be able to choose the correct and efficient treatment strategy in challenging cases of clinical endodontics.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 592 (1) Endodontic Case Management II</b> Modern endodontic technology and clinical endodontics. Includes lectures, seminars and simulation training. (1-1-0).</p>	<p><b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To provide students with the theoretical basis and rational for the full range of endodontic treatment. After the course the student will be able to choose the correct and efficient treatment strategy in challenging cases of clinical endodontics.</p>

<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 594 (5) Endodontic Case Review and Treatment Planning I</b>  Student case presentations, treatment choice and evaluation of prognosis. (0-0-2)</p>	<p><b>Present Calendar Entry: New Course</b>  <b>Type of Action: New Course</b>  <b>Rationale:</b>  To expose students to a wide variety of clinical cases and to discuss the biological and clinical rationale for patient management. After the course the students will be able produce professional level presentation of their own clinical cases and discuss the effectiveness and choice of the used treatment protocol as well as alternative treatment possibilities.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 595 (5) Endodontic Case Review and Treatment Planning II</b>  Student case presentations, treatment choice and evaluation of prognosis. (0-0-2)</p>	<p><b>Present Calendar Entry: New Course</b>  <b>Type of Action: New Course</b>  <b>Rationale:</b>  To expose students to a wide variety of clinical cases and to discuss the biological and clinical rationale for patient management. After the course the students will be able produce professional level presentation of their own clinical cases and discuss the effectiveness and choice of the used treatment protocol as well as alternative treatment possibilities.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 596 (5) Endodontic Case Review and Treatment Planning III</b>  Student case presentations, treatment choice and evaluation of prognosis. (0-0-2)</p>	<p><b>Present Calendar Entry: New Course</b>  <b>Type of Action: New Course</b>  <b>Rationale:</b>  To expose students to a wide variety of clinical cases and to discuss the biological and clinical rationale for patient management. After the course the students will be able produce professional level presentation of their own clinical cases and discuss the effectiveness and choice of the used treatment protocol as well as alternative treatment possibilities.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 721 (8) Clinical Endodontics, Year I</b>  Endodontic treatment of patients in the clinic under the supervision of specialist instructors. Supervised endodontic treatment clinic. (0-0-18)</p>	<p><b>Present Calendar Entry: New Course</b>  <b>Type of Action: New Course</b>  <b>Rationale:</b>  To give the student an in-depth training in clinical endodontics on a specialist level. After the course the student is able to perform diagnostic procedures, treatment planning and treatment procedures in demanding endodontic cases. The student will also be able to identify the factors affecting the prognosis of the treatment and communicate the required information to the patient.</p>



<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 722 (8) Clinical Endodontics, Year II</b> Endodontic treatment of patients in the clinic under the supervision of specialist instructors. Supervised endodontic treatment clinic. (0-0-18)</p>	<p><b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To give the student an in-depth training in clinical endodontics on a specialist level, including endodontic surgery. After the course the student is able to perform diagnostic procedures, treatment planning and treatment procedures in demanding endodontic cases independently. The student will also be able to identify the factors affecting the prognosis of the treatment and communicate the required information to the patient.</p>
<p><b>Proposed Calendar Entry:</b></p> <p><b>DENT 724 (6) Clinical Endodontics, Year III</b> Endodontic treatment of patients in the clinic under the supervision of specialist instructors. Supervised endodontic treatment clinic. (0-0-15)</p>	<p><b>Present Calendar Entry: New Course</b> <b>Type of Action: New Course</b> <b>Rationale:</b> To give the student an in-depth training in clinical endodontics on a specialist level, including endodontic surgery, traumatic injuries and resorptions. After the course the student is able to independently perform diagnostic procedures, treatment planning and treatment procedures in most demanding endodontic cases. The student will be able to identify the factors affecting the prognosis of the treatment and communicate the required information to the patient.</p>

## UBC Curriculum Proposal Form Change to Course or Program

**Category: (1)**

<p><b>Faculty: DENTISTRY</b>  <b>Department:</b>  <b>Faculty Approval Date: February 9, 2006</b></p> <p><b>Effective Session _08W___ Term _1__ Year 1 for Change</b></p>	<p><b>Date: March 7, 20008</b>  <b>Contact Person: Dr. Markus Haapasalo</b>  <b>Phone: 2-5996</b>  <b>Email: markush@interchange.ubc.ca</b></p>
<p><b>Proposed Calendar Entry:</b>  <b>MASTER OF DENTAL SCIENCE WITH DIPLOMA IN ENDODONTICS</b></p> <p>The Department of Oral Biological and Medical Sciences offers postgraduate clinical training in endodontics (leading to a Diploma) in conjunction with a Master of Dental Science (M.D.Sc.) degree. All students are required to complete both the thesis-based degree and the clinical Diploma program. The combined program ordinarily will require a minimum of three years to prepare the student for clinical practice in endodontics and to provide experience in clinical research focused particularly on the needs of an aging population. It is anticipated that domestic graduates will be eligible to sit the Fellowship Examination of the Royal College of Dentists of Canada and the Diplomate Examination of the American Board of Endodontists.</p> <p>Applicants must hold a D.M.D. degree or its equivalent, supply three letters of reference and meet the entrance requirements of the Office of Graduate Studies of the Faculty of Dentistry. Fluency in English (TOEFL score of 580 or better) is required of all applicants. Attention will be given to both clinical and research experience of the applicant. Suitable applicants will be interviewed by an Admissions Committee. Further information may be obtained from the Head of the Division of Endodontics, Department of Oral Biological and Medical Sciences, Faculty of Dentistry, 2199 Wesbrook Mall, Vancouver B.C., Canada V6T 1Z3. Students accepting an offer of admission are required to pay a non-refundable deposit.</p>	<p><b>URL:</b>  <a href="http://students.ubc.ca/calendar/index.cfm?tree=12,201,429,0">http://students.ubc.ca/calendar/index.cfm?tree=12,201,429,0</a></p> <p><b>Present Calendar Entry:</b></p> <p><b>Type of Action: New Program</b></p> <p><b>Rationale:</b>  There is an identified need for a graduate program in Endodontics. Presently, there is only one graduate program in endodontics in Canada (Toronto), and Canadian students must therefore obtain their education in US or other countries. The new graduate program in endodontics will strengthen the existing graduate programs in the faculty, such as periodontology and oral medicine. The endodontic program will also help to improve UBC Faculty of Dentistry commitment and dedication to service of the public by improved possibilities to offer high quality treatment in challenging cases that are beyond the limits of patient care in the undergraduate clinic. Interaction between the undergraduate and graduate clinic will also directly improve undergraduate students learning possibilities by deepening their understanding of the discipline.</p> <p>The combined clinical training/research program in endodontics will:</p> <ul style="list-style-type: none"> <li>- enhance the study and practice of endodontics</li> <li>- attract dentists to a combined academic/clinical career</li> <li>- improve the scholarly environment within the Faculty of Dentistry by broadening the research and clinical focus of the Faculty</li> <li>- foster interdisciplinary clinical and</li> </ul>

	<p>laboratory research in the health and social sciences across campus</p> <ul style="list-style-type: none"> <li>- advance endodontic health in the population through education of outstanding endodontists</li> <li>- ensure ongoing supply of mentors for Continuing Education Programs</li> </ul> <p>The program will attract graduate students who have clinical experience in dental practice. It will offer research training leading to a Master of Dental Science degree (MDS) within the context of existing graduate programs plus clinical training leading to a Diploma in Endodontics from the Oral Biological and Medical Sciences. The course work in 500-level courses for the degree and for the diploma will overlap to accommodate the research and clinical objectives of the program. Two students will be accepted in each year of the three year program.</p>
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## **APPENDIX II**

### **THESIS REQUIREMENTS FOR THE COMBINED MDSc/DIPLOMA IN ENDODONTICS PROGRAM**

The Master of Dental Science component of the Combined MDSc/Diploma in Endodontics Program, requires the student to engage with original research that relates to Endodontics. This research can be clinical, laboratory, or other, as approved by the Program Director. Research projects will culminate in the following required written documents.

#### **1. Comprehensive Review Paper on the Topic of the Original Research**

This paper has to be written independently and follow the format at Critical Reviews in Oral Biology and Medicine (that is part of the Journal of Dental Research). The supervisor can be asked for guidance and feedback. The paper is then submitted to the supervisor and the committee members a minimum of two weeks prior to the examination. This paper will be judged as Pass Without Corrections, Pass With Minor Corrections, Pass With Major Revisions or Fail. In case of a failing grade, the Committee will make recommendation for an additional paper to be written by the student on a related topic. A failing grade on the second paper will result in the student failing the program.

#### **2. Original Research Paper**

Students are asked to write a research paper based on original research performed by that student. Supervisory Committee will decide when the student is allowed to start writing the paper (when the research results have been finalized). This paper must follow the guidelines of the Journal of Endodontics. Writing should involve close feedback from the supervisor. When the paper is submitted to the Supervising Committee (minimum of two weeks prior to the examination) it should be formatted to a PDF format including the figures in the text (as it would appear in the Journal).

**NOTE:** Students are required to meet with their supervisory committee on a semi-annual basis and supervisors will complete a Supervisory Committee Summary Report. A copy of this report will be filed in the Graduate Studies office of the Faculty.

### 3. **Oral Examination**

The candidate will combine the review paper and original research paper, and add the title page, a content page and a 1-2 page summary that will combine the review and original research paper. These documents should be bound together to a thesis book. The oral examination will follow the guidelines of a regular Master of Science format including a 20-30 min. presentation of the research data, and questions from the members of the Examination Committee (about 60 min). The presentation and the defense will be judged as Pass/Fail. In the case of a failing grade, the candidate will be asked to take a re-examination. Failing of the re-examination will lead to the student failing the thesis and the entire program.

After the final approval of the review paper and the rest of the thesis, it will be bound together and a minimum of three bound copies delivered to the graduate secretary (one copy for the supervisor, one for the department and one for the student library). Students are encouraged to publish the original research and review papers. If published, the student needs to get the publisher's permission for reproduction of the papers in their Master of Dental Science thesis.

