



# School of Dental Medicine

**University at Buffalo** *The State University of New York*

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## **Academic Concentrations and Thesis Honors Program for the Class of 2018**

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## CONCENTRATION PROGRAMS

The Academic Concentration (formerly Minors) Program was developed in 1972 to enable students to concentrate and expand their studies in disciplines in which they have a particular interest. Such efforts may later be used to enhance career goals such the emphasis on a particular area of interest in a general practice setting or, in some cases, the pursuit of specialty training. The term "concentration" in this context denotes the completion of a minimum number of hours in a particular area of dentistry of the student's choice, beyond that required of all students in the DDS program and is distinct from "minors" as used in baccalaureate programs and every graduate's general dentistry "major".

Those students who successfully complete the requirements of a concentration will have it noted on their transcript but it will not be indicated on their diploma.

**Students interested in a concentration should consult with the individual program advisors. Applications should be made directly to the program advisor since they make admissions decisions.** Please note that certain concentrations may require participation prior to the beginning of the fall semester of the 4<sup>th</sup> year and may have limited enrollment.

This brochure has been compiled to inform you about the Concentrations program. Any questions or suggestions should be directed to Dr. Donald Antonson, Associate Dean for Academic Affairs.

## **ESTHETIC DENTISTRY CONCENTRATION**

### **Purpose**

The primary goal of this program is to provide students with a deeper and broader understanding of the principles, concepts and theories of esthetic dentistry, as well as to help develop clinical proficiency in the restoration of natural teeth using resin composites. A secondary goal is to understand what clinical situations may require indirect porcelain veneer restorations in the esthetically driven patient.

This course will teach students esthetic dentistry procedures beyond what is taught in the undergraduate core curriculum and will provide the student with the comprehensive experience, insight and knowledge necessary to think through these complex cases to produce a successful esthetic outcome.

### **Objectives**

1. Become familiar with state of the art esthetic materials and techniques for their usage
2. Understand the techniques required for the formation of predictable proximal contacts
3. Make Class III, IV and V restorations totally “invisible”
4. Close diastemas
5. Change the color of a single dark tooth to match existing dentition with direct composite resin veneering thru step-by-step sequencing of layers
6. Use opaquers to mask unwanted color in creating invisible restorations
7. Use tints to enhance color and translucency, and to create customized restorations
8. Contour, characterize and finish final restorations in order to make them durable
9. Understand the various principles of smile design
10. Understand esthetic realignment/recontouring of teeth
11. Understand and implement clinical photographic techniques

### **Program Advisor**

Robert J. Yetto, DDS (ryetto@buffalo.edu) Department of Restorative Dentistry,  
225-B Squire Hall, 716-829-2862

Deadline for submission of application

**March 14, 2017**

Announcement of accepted candidates

**March 27, 2017**

Commencement of course

**April 25, 2017 - 4:30pm**

### **Prerequisites**

- GPA 3.0 or above
- Must be in good clinical standing as verified by the Assistant Dean for Clinical Affairs
- Must have received an A or B grade in RDN 835 Cariology and Direct Restorations (both Fall and Spring)

Number of students accepted into the Program

A maximum of eight students will be accepted

### **Didactic requirements**

- Enrollment in RDN 864 Advanced Adhesive Dentistry
- Course meets approximately every other week for 3 hours, from 5:30 – 8:30 PM (dates to be determined)
- Attend arranged lectures by outside cosmetic dentists (to be determined)

### **Hands-on Workshop requirements**

The hands-on workshops will allow students opportunities to use different restorative materials to restore broken down dentition. The workshops will be sponsored by different companies and require extensive preparation and financial commitment from these sponsors, so missing more than 1 workshop will result in dismissal from the program.

## **Clinical requirements**

The student will work with one of the participating faculty in their tier to complete three of the following 5 case types:

- Restore a total of six partially broken down natural anterior dentitions with direct resin (ie., Class III, IV and V resin restorations)
- Close an anterior diastema using direct resin
- Restore a single maxillary central incisor with a Class IV direct resin restoration involving at least 2/3rds of the incisal edge
- Restore a single case of at least 4 anterior direct resin laminate veneers
- Restoration of two cases of adjacent posterior proximal contacts (ie., back to back boxes), each case involving at least one molar

Diagnostic casts (mounted and equilibrated in conformative occlusion), complete photographic documentation, anterior wax-up (when indicated) and restoration of the teeth will be required for all cases. Completed cases will be presented at seminars on a rotating basis.

One of the above cases is to be submitted into competition for one of the Esthetic Dentistry Awards at years' end.

## **Course requirements**

Students will be asked to bring with them certain instruments such as hand pieces, finishing materials and other generic materials. Burs, restorative materials, finishing instruments and teeth will be provided for bench exercises.

Magnification loupes are required.

## **Application process**

Written application to this concentration must be turned in to Nick Sniatecki in room 235 Squire no later than 4:00 PM on Tuesday March 7th, AND an electronic copy should be emailed to [ryetto@buffalo.edu](mailto:ryetto@buffalo.edu) under the subject heading "esthetic conc app" by the same deadline. The application should indicate your class rank, GPA, RDN 835 grades and include a statement as to why you want to participate in the Esthetics Concentration.

## ORAL BIOLOGY

### Purpose

The goals of the Concentration in Oral Biology (MOB) are to: 1) foster scholarly student activities through an organized, structured and supportive program; 2) expand the students abilities to think analytically and independently, and to develop their problem solving abilities; 3) encourage students who begin research early in the D.D.S. program to bring their research projects to some degree of completion; and 4) expose students to faculty role models so as to encourage their consideration of an academic career.

### Program Advisor

Dr. Frank Scannapieco ([fas1@buffalo.edu](mailto:fas1@buffalo.edu)), Department of Oral Biology, 109 Foster Hall, 829-3373.

### Prerequisites

The student:

- has usually participated in the Student Summer Research Program for at least 2 summers prior to the senior year.
- must have a grade point average of 2.5 or greater.
- must register to complete the D.D.S. program with "Thesis Honors".
- must be sponsored by an appropriate faculty mentor.
- must be in good clinical standing as verified by the Associate Dean for Clinical Affairs.

### Admission

Submit a program proposal to the Student Research and Thesis Honors Committee (SRTHC) of the School of Dental Medicine. The program proposal will include a research proposal and course work. Proposals must be accepted by the SRTHC for students to be accepted in the MOB program.

### Requirements

1. Perform the proposed research over the course of the fourth year.
2. Attend a weekly research-oriented, journal club (ORB 520 Critical Analysis of Literature) in Oral Biology
3. Attend research seminars in the Department of Oral Biology (usually held on **Mondays** at noon throughout the Fall and Spring semesters).
4. Register for at least 2 credit hours.

### Number of Students Admitted

Maximum of 10

### Program

Students accepted into the Concentration will be given every reasonable opportunity to pursue a research project. It is assumed that the bulk of time required for research will be during the evenings and weekends. However, as time is often the limiting factor in pursuing research, students participating in the Concentration should be encouraged to

continue their research by permitting some release time from clinical activities, assuming acceptable progress in their clinical program is maintained. Students may be released from clinic when their patients should disappoint. They may also be permitted 1/2 day per week during the fourth year to pursue studies outlined in the research proposal. The amount of time allowed for research activities will vary depending on individual circumstances. It should be emphasized that students who participate in this program will be expected to successfully complete all clinical and didactic activities expected of other students in the D.D.S. program. Space and necessary supplies will be provided by the research mentor(s).

Students may have the opportunity to present their research findings at local (Dental School Research Day), regional (e.g. Niagara Frontier Dental Meeting, local IADR meeting) or national (e.g. AADR/IADR) meetings. Funding for travel expenses and meeting registration may be available from various sources including those provided by the School of Dental Medicine, individual departments, and/or the student mentor's research funds.

Students will be guided by a Research Committee consisting of three faculty members: the student's research mentor, one member of the Student Research and Thesis Honors Committee and an outside advisor (an individual not directly involved in the student's research). This committee will be responsible for monitoring student progress. Only students who show reasonable progress in **both their research program and in the clinical program** by the end of the Fall semester will be permitted to continue their participation in the Concentration into the Spring semester of the Senior Year.

Students who successfully complete the Oral Biology Concentration will be so acknowledged on their transcript but it will not, however, be noted on their diploma.

### **Administration**

This program will be administered through the Department of Oral Biology (F. Scannapieco, Director). However, any full-time or 1/2 time member of the faculty may serve as a mentor.

### **Required Course Work** –at least one of the following:

Course #	Title	Credit Hours
ORB 545	Dynamics of Bone	2 (given every Fall Semester)
ORB 517	Oral Microbial Ecology	2 (given alternate Spring Semesters)
OS 503	Oral Biochemistry	1 (given every Fall Semester)
OS 512	Research Design In Oral Science	2 (given every Fall Semester)
OS 506	Biomaterials	1 (given every Fall Semester)
OS 504	Oral Immunology	1 (given every Spring Semester)

## **ORAL AND MAXILLOFACIAL SURGERY CONCENTRATION**

### **Purpose**

A concentration in oral and maxillofacial surgery is offered to senior students who are considering the specialty as a career. Enrollment is limited to five individuals who will be applying to oral and maxillofacial surgery residency training programs for specialty education. The program is directed by Dr. John H. Campbell.

### **Student selection is based on the following criteria:**

1. Academic standing. Students must be in good standing at the School of Dental Medicine and current in their graduation requirements (i.e., not on probation). Individuals with grade point averages above 3.2 and class rank in the top 1/3 will be given preference.
2. Submission of a current vita (résumé). This should include previous education, class rank, current GPA, Part I National Board Scores, academic honors, and pertinent extracurricular activities.
3. A personal interview with the director of the concentration.

### **Requirements for completion of the program:**

1. Participation in at least 45 hours of didactic instruction in oral and maxillofacial surgery elective courses.  
Elective courses offered by the department include:  
Oral and Maxillofacial Surgery Seminar (OSU 900, OSU 901, Campbell)  
Held Tuesdays at 7:00 a.m.  
Oral and Maxillofacial Surgery Clinical Case Conference (OSU 902, OSU 903, Campbell)  
Held Tuesdays at 8:00 a.m.  
Oral and Maxillofacial Surgery Literature Seminar (OSU 904, OSU 905, Campbell)  
Held on the last Thursday of the month at 7:00 a.m.  
Orthognathic Conference (OSU 906, OSU 907, Campbell)  
Held in conjunction with orthodontics on the second Thursday of the month at 8:00 a.m.  
Oral Surgery Seminar (OSU 861, Margarone)  
Lasers in Dentistry (OSU 864, OSU 865, Mang)  
Applied Surgical Anatomy of the Head and Neck (RDN 914, Hall)
2. Completion of an externship in oral and maxillofacial surgery at an institution outside the University at Buffalo. The externship should be for a minimum of one week in length, and should be to an institution that sponsors an oral and maxillofacial surgery-training program.

3. Participation in two trauma on-call experiences at the Erie County Medical Center. The student will be expected to respond to all emergency calls to the oral and maxillofacial surgery service during the time on-call.
4. Participation in two operating room surgical cases. The student will be expected to scrub and actively participate in the surgical management of the patient, including post-operative rounds.
5. Presentation at an oral surgery seminar. Each student will be expected to give a 30-minute presentation at one of the scheduled clinical case conferences.

## **PEDIATRIC DENTISTRY CONCENTRATION PROGRAM**

### **Purpose**

The Pediatric Dentistry concentration program is intended to provide an opportunity for interested students to gain further experience and knowledge in the field of children's dentistry. Students will have increased education and exposure to patient care, providing comprehensive dental care to children of all ages and interacting with patients of various medical and developmental disabilities. Participation in various outreach events will be a component of the program. The program is designed to be flexible so students can explore various clinical or educational aspects of pediatric dentistry according to their interests.

### **Program Advisor**

Dr. Carrie Wanamaker, Department of Pediatric and Community Dentistry  
[cw72@buffalo.edu](mailto:cw72@buffalo.edu) 114F Squire Hall

### **Time of Admission to Program**

Students are selected during the spring semester of their Junior year. Number of Students Admitted: Maximum of 35.

### **General Program**

Students are required to complete a minimum of at least six credit hours of courses that are approved by the program advisor. PDO 855 (Summer) and PDO 860 (Fall) are required. In addition, students are required to enroll in either PDO 840 (Summer) OR PDO863 (Spring). PDO855 is considered a summer course and it is expected that students will complete most of it during the summer. It is possible to put in some time during the fall semester through attending additional clinics on breaks, Saturdays, and Extended Hours clinics, enabling students to complete PDO 855 by the close of the fall semester.

### **Summer Requirements**

PDO 855, Pediatric Dental Procedures

### **Clinical Courses**

**PDO 855, Pediatric Dental Procedures**, Dr. Creighton & participating faculty  
4.0 credit hours, Summer/Fall semester (REQUIRED)

This course consists of 10 half days of rotation throughout the pediatric clinics. This will expose the students to additional operative/hygiene procedures, operating room and sedation cases, special needs and specialty clinics, and outreach events.

**PDO 840, Elective Pediatric Dental Clinic**, Dr. Creighton & participating faculty  
2.0 credit hours, Summer/Fall semester.

This course consists of an additional 10 half days of rotation through the clinics, allowing the students to increase competency in the areas of restorative dentistry, behavior management, clinical diagnosis and treatment planning.

### **Didactic**

### **Courses**

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**PDO 860 Literature Review**, Dr. Wanamaker & participating faculty

1.0 credit hours, Fall semester (REQUIRED)

The purpose of the course is to introduce students to current pediatric dental literature topics while exploring the AAPD Reference Manual (oral health policies, clinical guidelines and resources) and the AAPD Core Reading List journal articles. The course will require students to create presentations to their peers as an educational component, and allow students to engage in discussion of the topics assigned. The students will be required to give a self-assessment of their presentation, and critiques of their classmates' presentations.

**PDO 863, Advanced Pediatric Dentistry**, Dr. Wanamaker & participating faculty

1.0 credit hours, Spring semester.

The purpose of the course is to further expose the students to multiple areas of pediatric dentistry including basic dental procedures, trauma, space maintenance, interceptive orthodontics, early childhood caries, behavior management and hospital dentistry. This is done in both the classroom and in the laboratory/clinical environment.

## PERIODONTICS

### Purpose

The concentration in Periodontics is designed for students interested in obtaining additional clinical and didactic experience in periodontics. This is of particular value to students contemplating a general dental practice in which periodontics will play an important role as well as to students considering specialty training in periodontics.

### Program Advisors

Drs. Sebastian Ciancio, ([ciancio@buffalo.edu](mailto:ciancio@buffalo.edu)) and Othman Shibly, ([shibly@buffalo.edu](mailto:shibly@buffalo.edu))  
Department of Periodontics, 250 Squire Hall, 829-3845

### Admission

Students are selected during the spring semester of their third year. Selection is based on interest in periodontics rather than scholastic standing. However, if the Student Progress and Promotions Committee believe that participation in this concentration program may jeopardize graduation, students may be asked to withdraw.

### Number of Students Admitted

Maximum of 15

### Didactic Courses

A minimum of 4.5 credit hours of didactic course work is required. Some courses are offered by the Department of Periodontology and may fulfill the didactic part of this program. With approval of the program director, electives from other departments having relevance to periodontics may also fulfill the concentration requirements. (See program advisor for available courses and refer to Senior Selective Brochure.)

Courses accepted in Fall 2014 are:

- PER855 – Problem Solving in Periodontal Therapy
- PER862 – Clinical Periodontal Therapy
- PER914 – Postgraduate Treatment Planning\* - tentatively – may not be offered
- PDO840 – Elective Clinic
- ORB545 RD – Dynamics of Bone (fall only)
- RDN853 – Adv Prosth-Gen Dentist
- RDN855 – Sports Dentistry
- RDN861 – Dental Practice Mgmt
- OS812 – Res Design Oral Sci
- OSU864 – Lasers in Dentistry
- OSU866 – Oral Surgery Elective
- 871 Independent Study (you must find a research mentor, up to 2.0 credit hours allowed)  
most students do this with Dr. Ciancio.

## **Clinical**

Following successful completion of your first periodontal surgical procedure, one additional surgical procedure in Periodontics must be completed. (See program advisor for specifics.) At least one of the two clinical cases must be documented at a level equivalent to that required of postgraduate students in Periodontics including clinical photographs taken before, during, and after therapy and pre and post-treatment radiographs. Additional cases or written reviews of clinical procedures may be submitted for credit as Independent Study with the approval of the Program Director when the student has difficulty in fulfilling the 4.5 credit hour requirement . If adequate surgical procedures are not available, the one surgical case must be written up with a full description of the case and evidence based data applied to the procedure carried out, with references to support these procedures. Also the student will be expected to assist in one post graduate surgical procedure and provide a written summary of the procedure of 300-400 words

## **PROSTHODONTICS CONCENTRATION PROGRAM**

### **Purpose of Program**

Prosthodontics is the speciality of esthetic, implant and reconstructive dentistry. The prosthodontic concentration is designed for those students interested in additional clinical and didactic experience in these areas of restorative dentistry, and to introduce students to prosthodontics as a speciality. This program is particularly intended for students who demonstrate above average interest and ability in all phases of restorative dentistry, and have a keen interest in this discipline.

### **Deadline for submission**

**application** March 7, 2017

### **Announcement of accepted individuals**

March 27, 2017

### **Number of students that will be accepted into the program**

Eight

### **General Program Requirements**

Didactic Course Schedule:

#### **Choose one or both of the following:**

RDN 859 Fixed Prosthodontics: The Inter-Disciplinary Specialty. Dr. Marshall Fagin. (spring semester).

RDN 867 Implant Dentistry Seminar. Dr. Sebastiano Andreanna. (spring semester)

#### **The following courses are required:**

RDN 900 Advanced Clinical Treatment Planning and Clinical Case Presentation. Dr. Hyeong Kim. Mondays, 7:30-8:30 a.m., Room 222B Squire Hall (student must audit two classes in the spring semester).

RDN 853 Advanced Prosthodontics for the General Dentist  
Dr. Jennifer Kuracina – one Thursday per month, 4:15-5:15PM, 8 sessions over fall and spring semesters

#### Clinical:

The student will work with one of the participating prosthodontist faculty in the tiers to complete two of four types of patient treatments:

- 1- A multi-unit fixed restoration on implants (adjacent crowns or FDP) or an implant-retained overdenture
- 2- a comprehensive fixed (6 or more units), or combined fixed and removable prosthodontic reconstruction
- 3- an anterior esthetic case: student must perform the appropriate diagnostic workup and execute treatment using appropriate indirect restorations
- 4- a post-grad level complete or partial denture case

Students must present treatment plans for approval by the Concentration Program Director. Patient treatment should be executed exclusively with the faculty mentor with whom a case was treatment planned to better ensure expeditious completion of treatment. Faculty mentors include Drs. Alexander, Bairam, Brewer, N. Kim, Kuracina, McLean, McHenry, Mobarhan, Pusateri, Qeblawi, Sadid-Zadeh, Shenoy, and Stephan (and possibly other prosthodontists, depending on scheduling.)

Self study:

The student must select a topic of interest in prosthodontics and prepare a current, evidence-based written report on it to be completed by the start of the spring semester. Topics must be approved by Dr. Kuracina by the end of September.

**Completed applications must be turned in to Nick Sniatecki in room 235 Squire no later than 4:00 PM on Tuesday March 7th, AND an electronic copy should be emailed to [kuracin@buffalo.edu](mailto:kuracin@buffalo.edu) under the subject heading "pros conc app" by the same deadline.**

## THESIS HONORS

### General Information

The student research program provides an opportunity for dental students to become involved in research during the academic year as well as in the summer inter-session period. Participation in research encourages critical review and analysis of scientific design - skills crucial to the development of clinical competence in the processes of patient diagnosis and treatment evaluation. Such experiences also provide the student with insight into additional career alternatives in dentistry. This opportunity has led a number of participants to pursue careers in academic dentistry on both a full- or part-time basis. In addition, the research experience allows students to interact and work with faculty under more informal circumstances.

Many students work with a single faculty member on research in a specific area that extends over three or four years of their dental school experience. By compiling the results of completed research into a thesis and presenting the results of their efforts to the members of the Student Research and Honors Committee, students may graduate with thesis honors – a designation noted on the diploma and official transcript.

Approximately 40 faculty members participate in the Student Research Program. Their research interests include all areas of the basic sciences and dental clinical sciences. Students are encouraged to contact these faculty members to pursue specific projects.

Attempts are made to subsidize participants whenever possible. Stipends for summer research students are made through the School of Dental Medicine. Additional awards are also made available by the American Association for Dental Research, on a competitive basis.

While there is no requirement for students to become involved in research while completing the requirements for the D.D.S. program, they are encouraged to do so. This experience adds an extra dimension to their education. The University at Buffalo School of Dental Medicine is a world center for dental research. Students who take advantage of this opportunity become far more knowledgeable of their profession regardless of whether or not they choose a career in dental research.

Please refer to [www.sdm.buffalo.edu/research/student/](http://www.sdm.buffalo.edu/research/student/) for further information. Graduation with Thesis Honors Students who have participated in clinical or basic science research, or who have ongoing projects, are eligible for graduation with Thesis Honors. This achievement is designated on the diploma, the academic transcript, and recognized at the graduation ceremonies. Briefly, the requirements for Thesis Honors include compiling results or manuscript(s) into a short thesis that is submitted to the Research and Honors Committee and orally defended.

Through completion of this form and its return to Dr. Edgerton by June 1, 2012, the Student Research and Honors Committee will contact all students who have not yet met with us to discuss thesis guidelines and format, discuss potential problems, and evaluate their progress.

Name: \_\_\_\_\_

Advisor(s): \_\_\_\_\_

Thesis Subject  
Area: \_\_\_\_\_

Return to: Dr. Mira Edgerton  
310 Foster Hall