

Graduate Program Handbook



Department of Oral Biology
University of Pittsburgh School of Dental Medicine

DEPARTMENT OF ORAL BIOLOGY MISSION

The mission of the graduate studies program in oral biology is to foster intellectual curiosity, excellence, and creative vision in the students, and to prepare them as future leaders in the fields of academic dentistry and dental and craniofacial research.

GRADUATE STUDY IN THE DEPARTMENT OF ORAL BIOLOGY

The Department of Oral Biology ([DOB](#)) at the University of Pittsburgh, School of Dental Medicine (UPSDM) has established an interdisciplinary graduate program which offers both the Doctor of Philosophy (PhD) and Master of Science (MS) degrees in Oral Biology. Graduate study in the DOB covers a wide range of topics at the molecular, cellular, organismic levels as well as translational and clinical studies.

These programs are designed to provide a stimulating environment for highly motivated and qualified students to prepare them for a rewarding career in academics or industry with the focus on Oral Health and Biomedical research and teaching. The scope of the program encompasses studies of fundamental biological phenomena related to the development, structure, and function of the craniofacial region and the development of new therapies, biomaterials, and diagnostic tools for the treatment of diseases and disorders in the craniofacial area with the aim of improving health and well-being. Currently, faculty in the DOB are focused on two areas of research concentration (ARCOs), Craniofacial Regeneration and Craniofacial Genetics, and will form the basis of graduate training in this program.

HANDBOOK INTRODUCTION

This handbook reflects the cumulative experience of the Graduate Studies Committee and Faculty in the Department of Oral Biology vis-à-vis graduate student education and research. The purpose of this handbook is to define current regulations as well as “best practices” to achieve the following goals:

- Outline graduate requirements and provide milestones and typical timelines to assist graduate students in timely completion of their MS and PhD degrees.
- Promote clear understanding of the mutual responsibilities and expectations of faculty advisors and graduate students.
- Enhance the quality of faculty mentoring of graduate students.

Note that we do not intend this handbook to be a “guide to graduate student living in Pittsburgh” (students interested in such a topic might wish to visit the links here <http://www.pitt.edu/prospective-students>). Our ultimate goal is for this handbook to be of valuable service to the next generation of academic *leaders* that we have been entrusted to educate and teach in our classrooms and laboratories.

As “best practices” is a moving target, we welcome any suggestions to improve this handbook!

Obtaining Forms

Throughout the handbook there are references to various forms. These forms are required for completing different components of the graduate program and can be accessed by students and their advisors via Box:

<https://pitt.box.com/s/ja0szgemf6oezbtqvbawzm3nd0c03vbk>.

Effective Date

The policies and regulations put forth in this handbook are effective as of the date indicated in the document's footer. Any changes to the document are in effect as of the version (v.) and date given in the footer of this document. It is the student's responsibility to check for updates and revisions to this document. Students will be held responsible for the specific policies and procedures in the handbook version of the year that they matriculated in.

Disclaimer

The information contained herein is provided for your reference. Please be advised that University, School, and Department policies and requirements are subject to periodic changes. The Department of Oral Biology reserves the right to correct and/or amend the information without advance notice. For additional information about graduate study at the University of Pittsburgh, Department of Oral Biology, please contact the Chairman of the Graduate Committee (Dr. Mark P Mooney).

1. DOCTOR OF PHILOSOPHY (PhD) DEGREE

1.1. Admissions Criteria

All interested students will apply for admission to the program by submitting their application materials for admission by **January 15th**. Any questions regarding this procedure please visit the [DOB graduate program website](#) or contact the DOB Graduate Studies Administrator:

Ms. Lynn Marendo
 Department of Oral Biology
 347 Salk Hall
 University of Pittsburgh
 Pittsburgh, PA 15261
 412-383-7695
lmk55@pitt.edu

Admissions will only be considered for the Fall semester following application to the program. However, early applications are encouraged, and offers may be extended to suitably qualified candidates before the application deadline. All applications will be evaluated by the Graduate Studies Committee, comprised of the DOB Graduate Program Director (Dr. Mark P. Mooney), the Director of the Center of Craniofacial and Dental Genetics (CCDG) (Dr. Mary L. Marazita), the Director of the Center of Craniofacial Regeneration (CCR) (Dr. Charles Sfeir), the Director of the Dental Clinical and Translational Research Center (CTRC) (Dr. Alex Vieira), and the DOB Graduate Curriculum Committee Chair (Dr. Elia Beniash).

Notification of Admissions Decisions: Admissions review begins after January 15, and applicants can expect to be notified of the department's decision within eight to 10 weeks. Financial aid offers are made together with admissions offers.

Admissions Requirements to the Department of Oral Biology Graduate Program:

- **Application.** Applicants are required to complete an application to the program. Application forms can be downloaded on the [Admissions section of Oral Biology Graduate Program website](#).
- **Prior Education.** A baccalaureate degree in a natural or physical science, engineering, or other relevant programs is preferred. Applicants with baccalaureate degrees in other fields should have successfully completed courses in the basic sciences.
- **Transcripts.** A minimum grade point average of 3.0 (on a scale of 4) or its equivalent from an accredited institution. Official transcripts of all undergraduate and prior graduate coursework should be submitted directly by all colleges and universities attended to **Ms. Lynn Marengo, Graduate Administrator, University of Pittsburgh, Department of Oral Biology, 347 Salk Hall, 3501 Terrace Street, Pittsburgh, PA 15261.**
- **Personal Statement.** Applicants need to complete the personal statement form. Applicants should discuss at length their intellectual and professional interest in graduate study in Oral Biology. **This statement is a vital part of the application, and carries the most weight in our admissions decisions.** This statement should appropriately address the following questions:
 - What are the applicant's primary interests within the chosen field of study (i.e., Craniofacial Genetics or Tissue Regeneration) and list any relevant background experience that might make the applicant a good graduate candidate in these areas?
 - Which faculty mentor and lab would the applicant like to work with?
 - Where does the applicant see themselves after graduate school (what type of career is the applicant training for)?
- **Letters of Recommendation.** A minimum of three letters of recommendation are required. Letters from individuals familiar with the applicant's academic or research accomplishments are of particular value to the evaluation process. Letters of recommendation should be sent to **Ms. Lynn Marengo, Graduate Administrator, Department of Oral Biology, 347 Salk Hall, University of Pittsburgh, 3501 Terrace Street, Pittsburgh, PA 15261.** [Download a Recommendation Form](#).
- **Graduate Record Exam (GRE) Requirement.** We require **all** applicants to submit verbal, quantitative, and writing scores from the Graduate Record Exam (GRE). Scores must be less than 5 years old at the time of application. Scores can be submitted to the DOB by using Institution code 2927, Department code 0604. Test scores must be submitted directly to the department from the Educational Testing Service. For information on the GRE go to <http://www.gre.org>.

Additional Admission Requirements for Non-United States Citizens

- **English Language Test Requirement.** Students applying from countries where the official language is not English are required to show evidence of English language proficiency by submitting the official results of the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Scores must be less than two years old. TOEFL or IELTS scores must be submitted directly from the testing service to the Department of Oral Biology.
 - **TEST OF ENGLISH AS A FOREIGN LANGUAGE (TOEFL):** For students whose native language is not English, a TOEFL score higher than 600 (paper test), or 250 (computer test), or 100 (iBT internet test) is required for

admission. TOEFL scores can be submitted to the DOB by using Institution Code 2927 and Department Code 45. For more information on the TOEFL exam visit <http://www.ets.org/toefl/>

- **INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM (IELTS):** The minimum IELTS score is 7.0. IELTS results certificates are to be sent directly to the OB Graduate Studies Office. For more information on the IELTS exam, visit <http://www.ielts.org>.
- International students may be admitted provisionally to the program with a TOEFL below 600 (paper test), or below 250 (computer test), or below 100 (iBT), or below a Band 7.0 on the IELTS, but they must take an additional test (the "Michigan" test) as part of registration (see <http://www.bc.pitt.edu/policies/policy/09/09-02-01.html>).
- Applicants who have completed or are about to complete a bachelor's degree or graduate degree from a regionally accredited institution in the United States are exempt from submitting English language proficiency test results, but the GRE requirement may then be required.
- **Graduate Record Exam (GRE) Requirement:** GRE scores are required for **all** applicants.
 - Outside North America, information about taking the GRE can be obtained by contacting the nearest United States embassy or consulate, or at <http://www.gre.org>.
- Additional general information for International Students is available through the [Office of International Services](#). However, if you have questions that are not answered by the information on these Web sites, please [contact us](#) or the Office of International Services (OIS) directly.

1.2. Financial Aid

All PhD applications will automatically be considered for financial aid in the form of [Graduate Student Research \(GSR\) fellowships](#). There are no separate forms for financial aid. GSRs are supported in the form of [stipends](#), tuition scholarships for up to 15 credits/semester, and health insurance. To be eligible to receive a GSR fellowship, students must maintain full-time status and must be enrolled for minimum of 9 credits of coursework. Oral Biology Graduate Student [tuition rates](#) are based on rates charged by the Graduate Schools in the Health Sciences (School of Pharmacy, School of Nursing, Graduate School of Public Health, and School of Health Related Professions). Presently there is no automatic financial aid available for students admitted to the MS program. MS students may be considered for financial aid and stipends on an ad hoc basis.

All students admitted for the PhD program will be provided with a GSR which will pay a stipend, tuition scholarship, and (most) fees for four-five years. The UPSDM will provide GSRs for all incoming PhD students for the first year of their study. Once chosen, the student's primary advisors will then be responsible for providing the remaining years of support. Stipends for PhD students are based on rates listed on the University of Pittsburgh web site (<http://www.pitt.edu/~graduate/stipends.html>). GSRs at the UPSDM will conform to the policies listed on the University of Pittsburgh web site (<http://www.pitt.edu/~graduate/GSRPolicyStatement.pdf>).

1.3. Areas of Research Concentration (ARCOs)

While faculty members in the DOB have a wide diversity of interests and are pursuing research projects which address fundamental, contemporary issues in oral biology and oral medicine, PhD students will be required to take one of two Areas of Research Concentration (ARCOs) which will focus their academic activities around particular faculty strengths. The two ARCOs are: 1) Craniofacial and Dental Genetics (CG); and 2) Craniofacial Tissue Regeneration (CR). Each ARCO is supported by a major research center within the DOB: The [Center for Craniofacial and Dental Genetics \(CCDG\)](#) and The [Center for Craniofacial Regeneration \(CCR\)](#). Both paths of study are embedded in a context of Oral Biology and Oral Health training with broad theoretical and interdisciplinary scopes. Students should declare an ARCO before entering the program.

1.4. Degree Requirements

It is expected that the PhD program will require about four-five years to complete. The PhD program is completely separate from the MS program (see Section 2.4 for MS Degree Requirements). Students may enter the PhD program directly following their undergraduate degree, and are not required to earn a master's degree first (although earning the master's degree can be incorporated into the PhD program without increasing the total length of time needed). Students who have already earned a master's degree elsewhere may receive Advanced Standing and credit for previous coursework which may shorten the time needed to earn a PhD by as much as a year.

Requirements for the PhD include:

- 72 total credits (50 didactic and 22 in research).
- Successful completion of “Core” foundation classes in the areas of Oral Tissues, Molecular and Developmental Biology, Statistics and Research Design, Craniofacial Embryology and Organogenesis, Craniofacial Anatomy, Craniofacial Regeneration, and Craniofacial Genetic Epidemiology.
- A two-part Successful Career Planning And Development course.
- A Scientific Ethics and the Responsible Conduct of Research course.
- All ARCO-specific required courses.
- Participation in Seminar/Journal Club all semesters (3 semesters for credit).
- A written and oral comprehensive examination after the 6th semester (for advancement to PhD candidacy).
- A one semester (minimum) teaching experience as an integral part of the training of each graduate student.
- A research project leading to a dissertation proposal.
- A dissertation defense.

Students must maintain a minimum, cumulative QPA of 3.00 and receive a B or better in all required courses to be eligible to take the comprehensive examinations as well as to graduate. A student may petition the Graduate Studies Committee to accept toward the 72-credit minimum (and/or the 50-credit minimum of formal courses) a maximum of 24 credits for coursework at the master's degree level earned in another approved graduate school.

1.5. Full-time and Part-Time Study

Graduate students who register for nine to fifteen credits in the fall or spring term are full-time students and are assessed the current tuition rate for their school. A school may require students enrolled in a degree program to register for more than nine credits. Students who register for fewer than nine credits are part-time students and billed on a per-credit basis. Admission procedures for part-time students are the same as those for full-time students. Doctoral students who have completed all credit requirements for the degree, including any minimum dissertation credit requirements and are working full-time on their dissertations may register for "Full-time Dissertation Study," which carries no credits or letter grade but provides students full-time status. Students so enrolled are assessed a special, reduced tuition fee.

1.6. Curriculum

The PhD program requires a minimum of 72 credits. Formal didactic coursework comprises 50 of these credits, which is further broken down into required and elective courses. The exact proportion of required versus elective credits varies by ARCO (see **Table 1** below). The remaining 22 credits are amassed through Research courses.

Generally, a full-time student will be enrolled in a minimum of three formal courses during fall and spring semesters until the required 50 credits of formal coursework is completed.

Table 1: Breakdown of <u>Minimum</u> Number of Total Credits by ARCO for the PhD Program in Oral Biology			
Craniofacial Regeneration ARCO			
Didactic Courses			50 cr
	Required Courses	37 cr	
	Elective Courses	13 cr	
Research Courses			22 cr
	Total Credits		72 cr
Craniofacial Genetics ARCO			
Didactic Courses			50 cr
	Required Courses	34 cr	
	Elective Courses	16 cr	
Research Courses			22 cr
	Total Credits		72 cr

1.6.1. Required Coursework

Most of the required didactic courses are part of the Oral Biology Basic Sciences Foundation Knowledge Block (**Table 2**). The majority of these courses are taken during the first two semesters. A few required courses are small seminar-type courses that were developed especially for the DOB Graduate Program. One course outside the department (*INTBP 2290 - Scientific Ethics and the Responsible Conduct of Research*) will also be required for all PhD students. In addition, all students are required to register for the *Seminar/Journal Club Course (ORBIOL 3504)* for their first 3 terms for credit. Following the third term, all PhD students are still required to attend and participate in Seminar/Journal Club for every term they are enrolled and present on campus, although they will not receive formal credit.

Depending on the student's ARCO, several additional didactic courses will be required at various stages. Students in the Craniofacial Regeneration ARCO (CR ARCO) must take the following courses: *ORBIOL 3509 – Composition, Structure, and Function of Mineralized Tissues*

and *ORBIOL 3602 – TMJ Regeneration and Mechanics*. Students in the Craniofacial Genetics ARCO (CG ARCO) must take the following course: *ORBIOL 3512 – Craniofacial Genetics*

Students in both ARCOs are also required to participate in a one-semester Teaching Practicum Course (*ORBIOL 2110*) in the third or fourth years of the program in an approved “host” class. Students will be evaluated on their performance as satisfactory (S) or unsatisfactory (U). Generally, graduate students will not be required to teach during the academic year that they plan to defend their dissertation. Students planning to defend their dissertation during the scheduled teaching semester should notify the Program Director in writing and the dissertation advisor must co-sign the letter. No other exemptions from teaching will be granted. Failure to satisfy the teaching requirement may result in dismissal from the program following a vote of the DOB Graduate Studies Committee.

An overview of courses and PhD requirement sequencing is presented in **Table 2**.

1.6.2. Elective Coursework

In addition to required coursework, elective courses must be taken to fulfill the didactic course requirements (**Table 1**). A minimum of 13 elective credits are required for the Craniofacial Regeneration ARCO and 16 elective credits are required for the Craniofacial Genetics ARCO. Electives can be taken from those offered by the DOB faculty or graduate level courses (2000 level or higher) offered outside the School of Dental Medicine (SDM). Electives taken outside the SDM, that will be used to fulfill the didactic course requirement, must be petitioned and approved by the DOB Graduate Studies Committee.

1.6.3. Research Credits

A minimum of 22 credits must be taken in research based classes (*ORBIOL 3505-Directed Research, ORBIOL 3818-Independent Study, or ORBIOL3510-Dissertation Research*) to fulfill the research course requirement (**Table 2**).

Table 2: Overview of Courses and Pathway for the Oral Biology PhD Curriculum		
Fall Term - 1st Semester		
Course #	Course Title	Number of Credits
ORBIOL 3503	Oral Tissues	3
ORBIOL 3504	Seminar/Journal Club	1
ORBIOL 3516	Foundations Of Successful Career Planning And Development Part 1	1
ORBIOL 3551	Foundations in Development, Genetics, and Biochemistry	2
ORBIOL 3552	Foundations in Statistics, Research Design, and Critical Thinking	3
ORBIOL 3555	Foundations in Embryology and Craniofacial Organogenesis	3
ORBIOL 3505	Directed Research	# credits as needed

Spring Term - 2nd Semester		
ORBIOL 3504	Seminar/Journal Club	1
ORBIOL 3546	Foundations Of Successful Career Planning And Development Part 1	1
ORBIOL 3553	Foundations in Genetic Epidemiology	3
ORBIOL 3554	Foundations in Craniofacial Anatomy	3
ORBIOL 3555	Foundations in Craniofacial Skeletal Regeneration	3
ORBIOL 3505	Directed Research	# credits as needed
Summer Term - 3rd Semester		
INTBP 2290	Scientific Ethics and the Responsible Conduct of Research	1
ORBIOL 3504	Seminar/Journal Club	1
TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
	Choose Mentor	
Fall Term - 4th Semester		
ORBIOL 3603	Human Growth and Development (offered every other year)	3
TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
Spring Term - 5th Semester		
ORBIOL 3508	Current Topics in Oral Health Research	1
TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
Required for all students in CR ARCO		
ORBIOL 3602	TMJ Regeneration and Mechanics	3
ORBIOL 3509	Composition, Structure and Function of Mineralized Tissues (offered every other year)	2
Required for all students in CG ARCO		
ORBIOL 3512	Craniofacial Genetics	2
Summer Term - 6th Semester		
TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
Fall Term - 7th Semester		
OBIOL 2110	Teaching Practicum (Fall, Spring, or Summer) (just 1 semester required)	2

TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
Spring Term - 8th Semester		
TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
	PhD Comprehensive Examination (in third year)	
	Following successful completion of comprehensive examination, formation and approval of a Dissertation committee chair and members.	
Summer Term - 9th Semester		
TBD	Electives	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
	Defend dissertation proposal and be admitted to PhD candidacy.	
Following Terms - 10-12th Semesters		
ORBIOL 3510	Dissertation Research (in last term)	# credits as needed
	Oral presentation and committee oral defense of dissertation.	
	Apply for Graduation and Graduation!	

Color Coding Key: **blue** = required didactic courses for all PhD students; **orange** = research courses; **purple** = required didactic courses for CR ARCO students; **red** = required didactic courses for CG ARCO students; **green** = elective didactic courses open to all PhD students.

1.6.4. Course Grades

Student will be graded by the A+ to F system (letter grade) for all required courses as defined by the Graduate Council of the University of Pittsburgh (<http://www.pitt.edu/~graduate/reggrades.html#defs>). Pass-Fail options may be available for some electives and will be determined by the individual course director. Incomplete (“I”) grades will be dealt with by the individual course directors as described in their respective course syllabi.

Students must maintain a minimum, cumulative QPA of 3.00 and receive a B or better in all required courses to be eligible to take the comprehensive examination as well as to graduate.

1.7. Student Advising

PhD students are encouraged to declare an ARCO and select a permanent advisor before entering the program. If this is not possible, a temporary faculty advisor will be assigned to each incoming PhD student. Temporary faculty advisors will also serve as the directed research advisors (*ORBIOL 3505*) for the first two semesters. Students who have not picked a permanent advisor yet will rotate through a number of laboratories in their chosen ARCO for the first two semesters to help pick a mentor and research area. At any time after arrival, but not later than the end of the first year, each undecided student will select a permanent principal advisor (or

advisors) with whom to work, and who agrees to serve in this capacity. Until the student selects an advisor, the graduate studies administrator and the temporary faculty advisor will help to provide general advice and to register the student for courses. Students are free to change their advisors at any time. Advisors consult with the students on their course selections and on their research and career plans, and will monitor their advisees' progress in the graduate program. They are also responsible for formally approving their advisees' course programs semester by semester.

1.8 Monitoring Student Progress

Student progress is monitored by the Graduate Studies Committee and the graduate administrator. The progress of all active graduate students will be systematically reviewed by the faculty in each ARCO early in the spring semester. Students should petition the Graduate Studies Committee for formal approval of their comprehensive examination committees and thesis committees (see below). After review by the full faculty, students receive written response to their petitions from the Graduate Studies Committee. Faculty advisors should notify the Graduate Studies Committee of their advisees' successful completion of the comprehensive examination. The graduate administrator will record progress towards advanced degrees. Students are advised to check with the graduate administrator periodically to ensure that their files are up to date.

Students enrolled in the PhD program will be reviewed annually by the DOB Graduate Studies Committee. Remediation of Student's academic under-performance or integrity will be accomplished in compliance with existing policies at the UPSDM and University of Pittsburgh Graduate Studies Office [Academic Integrity](#) and [Code of Conduct](#) Policies (see Section 4). If a student cannot satisfactorily complete their requirements towards the PhD degree they will be given the option for a terminal MS degree. If a student cannot satisfactorily complete their requirements towards the MS degree they will be terminated from the program.

1.9. PhD Comprehensive Examination

After completing the didactic course requirements, students must pass a comprehensive examination designed to test the breadth and depth of knowledge in their chosen ARCO. Students will be encouraged to take their comprehensive examinations during their third year of the program. A PhD student who obtains an MS degree, or enters the program with an MS degree, should take the Comprehensive Examination within 2 years of matriculation.

The comprehensive examination is a two-step process. First, the graduate student will petition the Graduate Studies committee for an exam date and to request approval of a committee chairperson and at least two more committee members (a minimum of 3 total members, with at least two members from the DOB). A letter will be sent to the student notifying him/her of the due date of the written proposal (approximately 45 days from receiving the letter).

Secondly, the student will be required to submit a written proposal in the format of a research grant (see description below). Once the written proposal is submitted, the student shall receive at least a one-week notice of the oral defense date. The oral defense will typically take place within 3 to 4 weeks following submission of the written proposal. NIH instructions for format should be followed except as amended by Oral Biology Graduate Program guidelines.

Unacceptable written proposals shall constitute a failure of the written portion of the exam. Submission of acceptable proposals will allow passage into the oral examination that will test the student's understanding of both the contents of the research proposal and the basic

concepts underlying the contents. The student will be graded *Pass with Distinction, Pass, or Fail*. A simple majority vote of the panel decides the grade. In the event of a failure of the oral exam, the student shall be given one opportunity to retake the oral examination. A second failure shall result in the dismissal of the student from the program or recommendation that the student transfers to the MS degree program for the completion of his/her training.

1.9.1. Proposal Format

The proposal will be based on the student's thesis research area and ARCO. For the written proposal, the following guidelines must be rigorously adhered to:

- The proposal should be well-organized and clearly, logically and carefully written in proper English.
- The proposal is expected to be conceptually well-founded and adequately documented. **The student is responsible for preparing an original research proposal. Dissertation advisors and others may be consulted on specific scientific issues, but the document must be prepared exclusively by the student. Advisors may not edit the written proposal for style or content or coach the student for the oral defense. Attribution to published and unpublished sources must be comprehensive.** The written proposal must be **original to the student**, although the project may have been previously outlined in the advisor's grant. The proposal should not be verbatim or slightly modified version of any published or unpublished papers the student may have written with the advisor or anyone else. The proposal should describe **original** and **innovative** experiments that will accomplish the stated aims and objectives of the research. The Specific Aims and Experimental Plan sections of the proposal must include **only** those experiments that have not already been done in the advisors or any other laboratory. The written proposal cannot consist of just a collection of experiments, but must include well defined hypotheses and rationale as well as the significance of the proposed experiments. How the expected results will benefit the field of research also should be discussed.
- The written research proposal will adhere to the following page guidelines:
 - (i) Title Page.
 - (ii) Abstract page - 250 words.
 - (iii) Specific Aims - not to exceed one page.
 - (iv) Significance - not to exceed three pages.
 - (v) Innovation - not to exceed half a page.
 - (vi) Experimental Design - not to exceed eight pages of text and four pages of tables, figures, and data.
 - (vi) Literature Cited: not to exceed four pages; must include complete citation with all authors, year, title, journal, volume, inclusive pages. References should be limited to relevant and current sources, published or unpublished, that are pertinent to the proposed research.
- Under no circumstances shall the entire proposal, including the title page and references, contain more than 19 pages of single space type, with one-inch margins on all sides. The type font should be no less than 12 point (whatever gives at least 1/8 inch height for capital letters), and line spacing should have no more than 6 lines of text within a vertical line.
- The research proposal must be converted to PDF (Acrobat) format for electronic submission. The file should be named as: [student's last name][year].pdf.

1.9.2 Administration

- The student shall have 45 days from the time of the notification by letter (see Eligibility above) to submit the completed proposal. Shortly after notification, the Comprehensive Exam Committee chair will meet with the student to discuss these guidelines, answer questions, and to clarify the extent to which the student's thesis advisor, faculty, post-docs and students may be used as a resource. Students shall take no more than four weeks from their laboratory work in the writing of their Comprehensive Examination proposal. Upon completion, (2) copies shall be submitted to the chairperson of the Comprehensive Exam Committee by 5:00 P.M. of the due date. Electronic copies of the proposal and the advisor's specific aims must also be submitted to the Comprehensive Exam and Graduate Studies Committee chairs. A copy of the student's written proposal will be given to the advisor who will be asked to certify that the proposal complies with the standards set forth in the previous Section.
- Examination proposals submitted after the deadline must be accompanied by a letter from the student which states the reasons for late submission and a justification for acceptance of the proposal. The Comprehensive Exam and Graduate Studies Committee Chairs will review all cases of late submission and inform the student within 2 working days whether the examination proposal has been approved for submission. Rejection of the proposal will be counted as a failing grade on the examination.
- As soon as possible (preferably within two weeks of submission of the proposal), the Comprehensive Exam Committee chair and members will evaluate the subject of the research proposal.
- If a majority of the Comprehensive Exam Committee feels that the student has successfully completed the written proposal, the Committee Chair will make arrangements to convene for an oral examination. If a majority of the panel finds the written proposal unacceptable, the Comprehensive Exam Committee Chair shall immediately notify the Graduate Studies Committee chair, who shall convene a meeting of the Graduate Studies Committee with or without the student in attendance to review the reasons why the proposal was deemed unacceptable. An unacceptable written proposal shall constitute failure of the written part of the comprehensive exam. The Comprehensive Exam Committee Chair shall submit to the Graduate Studies Committee chair a written evaluation of the proposal and reasons for failure. The Graduate Studies Committee chair will forward copies of the critique to the student and the student's advisor. Based on these critiques and guidelines, the student must submit a revised version of the proposal within three weeks and submitted directly by e-mail to the Comprehensive Exam Committee Chair. In the case of an unacceptable written proposal, the Comprehensive Exam Committee will evaluate the resubmission and will determine if the proposal is acceptable for passage into the oral exam. Failure at this stage will result in the dismissal of the student from the program or recommendation that the student will transfer to the MS degree program for the completion of his/her training.

1.9.3. Oral Examination Process

- Presuming an acceptable written proposal, the oral examination for each student will be scheduled as soon as feasible after submission of the written proposal (preferably within three weeks).

- At the beginning of an oral examination, and in the absence of the student, the Comprehensive Exam Committee chair (or a person designated by him/her) will briefly address the committee, communicating the ground rules for the examination.
- The oral examination will be held in a closed session, with only the student and the members of the Comprehensive Exam Committee in attendance. The student will begin the examination with an oral presentation (not to exceed 15 minutes) of the research proposal. The oral examination shall not exceed two hours, inclusive of the student's opening presentation. The research proposal shall be the **sole** document available to the student during the oral examination.
- It will be the Comprehensive Exam Committee's task to evaluate the student's understanding of both the contents of the research proposal and the basic concepts underlying them.
- At the end of the oral examination, the Exam panel will vote in private. The student will be graded *Pass with Distinction, Pass, or Fail*. A simple majority shall prevail; **ABSTENTIONS WILL NOT BE PERMITTED**. A tie shall be considered a *Fail* and there shall be no conditional pass/fail decision. After the Comprehensive Exam Committee vote, the Committee chair will immediately notify the student of the decision and evaluation of performance. A critique written by the Comprehensive Exam Committee chairperson, evaluating the exam performance and the pass/fail decision, shall be submitted to the Graduate Studies Chair who shall distribute copies to the Graduate Studies Committee, the student, and the student's advisor. Students and their thesis advisors shall be formally notified of the exam outcome by a letter from the Graduate Program Director. Students failing the oral exam will be given one more opportunity to retake the exam. The Comprehensive Exam Committee will provide reasons for failure to the student, the student's advisor and the Graduate Studies Committee within two days after the exam. The student, student's advisor, and the Comprehensive Exam Committee Chair decide on another convenient time to hold the oral (within two weeks). The Comprehensive Exam Committee members will vote at the end of the exam to pass/fail the student. A second failure shall result in the dismissal of the student from the program or recommendation that the student transfers to the MS degree program for the completion of his/her training.
- A "pass" will be warranted when both of the following conditions are met: (i) the written proposal is considered acceptable as presented, and (ii) the student has performed knowledgeably in the oral defense of the proposal.

1.10. Dissertation

1.10.1. Dissertation Committee

As soon as possible after completion of the comprehensive examination requirements, and certainly by the third year in residence, prior to admission to candidacy, the student must establish a doctoral dissertation committee that will: 1) participate in the student's preparation of the dissertation research proposal; 2) administer the oral dissertation overview; 3) offer advice while the student is collecting data as well as while the student is writing the dissertation; and 4) conduct the oral dissertation defense.

This committee will consist of at least three Graduate Faculty members from the Department of Oral Biology, including the student's advisor, and at least one graduate faculty

member from another department of the University or from another university. This person should be selected on the basis of contributions he or she can make by virtue of the particular areas of scholarly interest or expertise relevant to the dissertation topic. In addition, a scholar with special competence in the area of research of the dissertation may be appointed as an official member of the doctoral committee. The student must petition Dr. Heiko Spallek, Associate Graduate Dean at the UPSDM, for approval of the dissertation committee.

1.10.2. Dissertation Proposal

Before actively pursuing dissertation research, students will make an oral presentation of the intended project to their dissertation committee. The student gives the members of the committee a well-researched and well-written dissertation proposal at least one month ahead of time. No page limitation is required but enough should be presented by the student to allow the Dissertation Committee to judge the quality and feasibility of the dissertation project.

This overview is not pro forma and should not be the first discussion of the project between students and their committee members. If, after the overview, the committee members agree that the student should proceed with the dissertation project, they sign the advancement to candidacy form which is then forwarded to Dr. Heiko Spallek, Associate Graduate Dean at the UPSDM, for approval.

1.10.3. Public Presentation

Each student will present a formal colloquium to the department based on the dissertation research. This may form part of the dissertation defense, or it may come at an earlier stage so that the experience may be of benefit as the ideas in the dissertation take shape.

1.10.4. Dissertation Format

The dissertation must follow the format set forth in the University of Pittsburgh Library System Electronic Theses and Dissertations (ETD) website (see: <http://www.pitt.edu/~graduate/etd/>). Other PhD requirements are outlined in [Regulations Governing Graduate Study](#).

1.10.5. Final Oral Examination and Dissertation Defense

By the time of the oral examination and defense of the dissertation, students will have prepared and presented to their committee members a final version of the dissertation. It is expected that there will be sufficient interaction between the student and the committee members that alterations subsequent to the defense will be minimal and minor. All members of the doctoral dissertation committee should be present at the defense. Special accommodations (such as conference calling, video conferencing, etc) may be made for members of the committee outside the University. The procedures for the final oral examination are outlined in [Regulations Governing Graduate Study](#) (also see <http://www.pitt.edu/~graduate/regphd.html>).

The final oral examination in defense of the doctoral dissertation will be conducted by the doctoral committee and need not be confined to materials in and related to the dissertation. Any member of the Graduate Faculty of the University may attend and participate in the examination. The date, place, and time of the examination will be published well in advance in the University Times. Other qualified individuals may be invited by the committee to participate in the examination. Only members of the doctoral committee may be present during the final deliberations and may vote on the passing of the candidate. A report of this examination, signed

by all the members of the doctoral committee, will be sent to the Graduate Studies Committee and then to the Associate Graduate Dean, UPSDM. If the decision of the committee is not unanimous, the case is referred to the Associate Graduate Dean, UPSDM for resolution. The chair of the doctoral committee should ensure that the dissertation is in final form before requesting signatures of the members of the committee.

1.11. PhD Graduation Requirements

Normally, the semester during which the defense takes place is also the semester during which the student graduates and receives the degree. A formal Application for Graduation must be filed with the Associate Graduate Dean of the School of Dental Medicine. (Note that the deadline for submission of the application for graduation generally comes at the beginning of the semester in which the student plans to graduate). Students will be required to submit their Dissertation electronically. The Electronic Theses and Dissertations (ETDs) format is available from the University Library System (see <http://www.pitt.edu/~graduate/reggeneral.html>). Students will be responsible for all graduation fees.

All graduate students must be on active status (i.e., must have been registered for a minimum of three credits during a twelve month period) and must register for at least one credit during the semester in which they are graduated. Students who complete all the degree requirements in one semester but are graduated in the next, may petition Dr. Heiko Spallek Associate Graduate Dean, UPSDM for a waiver of this requirement. A student who is on inactive status must be readmitted and registered for three credits in order to be graduated.

In addition, the following procedures and requirements have been stipulated by the School of Dental Medicine. These requirements must be met before the last day of the semester in which the student has applied for graduation.

- At least one month prior to the defense: Student will make arrangements with the Oral Biology Graduate Program for a final defense date. The information will be relayed to the Associate Graduate Dean, UPSDM in letter-form stating student's name, graduate program, degree sought, title of dissertation, date, time and place.
- Each member of the student's Dissertation Examining Committee will be given a draft copy of the dissertation to prepare for the final defense. One copy of the draft dissertation is deposited with Dr. Heiko Spallek, Associate Graduate Dean at the UPSDM .
- After the dissertation defense the following should be brought to the Associate Graduate Dean, UPSDM (as one package). One copy of the final approved dissertation (unbound, with any needed corrections already made). The title page should have the signatures of all Committee Members. Two extra copies of the title page should accompany the thesis. A letter from the Chair of the Oral Biology Graduate Program giving official notice that the candidate has fulfilled all the academic requirements (the change of status and change of grade should accompany this letter). An official receipt [PITT-1453(383)] from the University Cashier (G-7 Thackeray Hall) for payment of thesis binding/microfilming fees is necessary for graduation.

Following approval of the dissertation, the PhD degree will be granted by the School of Dental Medicine.

1.12. Statute of Limitations

Requirements for the PhD degree should be fulfilled within a period of 10 calendar years from the student's initial registration for graduate study. If the entering student has received transfer credit for a master's degree, requirements for the PhD should be completed within a period of eight calendar years from the first registration for graduate study. There is also a strictly enforced five calendar-year limit on the PhD comprehensive examination. If the student has not completed all requirements for the degree within five years of successfully passing the Comprehensive Exam, the Comprehensive Exam must be retaken. (see <http://www.pitt.edu/~graduate/reggeneral.html>). Extensions may be granted on a case-by-case basis (see <http://www.pitt.edu/~graduate/reggeneral.html>).

1.13. General MS Degree Option

An MS degree in Oral Biology may be awarded (in addition to the PhD) during the course of a student's PhD program after successful completion of:

- 30 total credits
- Course(s) that satisfy the MS course requirements (see MS requirements below)
- An acceptable MS defense and paper.

The student selects at least three graduate faculty members (at least two of whom must be in the Department of Oral Biology) to participate on the MS advisory and evaluation committee. The Graduate Studies Committee should be petitioned for approval of the committee composition and the MS paper topic well in advance of the expected date of completion.

1.14. Application for Graduation

Each candidate for graduation must file an official Application for Graduation in the Office of the Dean early in the term in which graduation is expected. All graduate students must be on active status (i.e., must have been registered for a minimum of three credits during a twelve month period before graduation) and must register for at least one credit during the semester in which they are graduated. In exceptional circumstances, students who complete all the degree requirements at the end of a term but are graduated in the next may petition the Dr. Heiko Spallek, the Associate Graduate Dean of the SDM for a waiver of this requirement.

Prior to the end of the term in which they are graduated, all doctoral candidates must submit to the office of the Associate Graduate Dean a completed Survey of Earned Doctorates Awarded in the United States.

1.14.1 Certification for Graduation

The Graduate Faculty of the department or program evaluates the performance of the student. If that performance is satisfactory, a report should be submitted to the dean certifying that the candidate has satisfactorily completed all departmental requirements for a graduate degree. The Associate Graduate Dean, after confirming that the overall school and University requirements have been met, certifies the candidate for graduation.

2. MASTER OF SCIENCE (MS) DEGREE

2.1. Admissions Criteria

Same as for PhD program. See section 1.1.

2.2. Financial Aid

Oral Biology Graduate Student [tuition rates](#) are based on rates charged by the Graduate Schools in the Health Sciences (School of Pharmacy, School of Nursing, Graduate School of Public Health, and School of Health Related Professions). Presently there is no automatic financial aid available for students admitted to the MS program. MS students may be considered for financial aid and stipends on an ad hoc basis and at the discretion of the Mentor supervising the student's work.

2.3. Areas of Research Concentration

While faculty members in the DOB have a wide diversity of interests and are pursuing research projects which address fundamental, contemporary issues in oral biology and oral medicine, MS students **will not** be required to formally declare or specialize in an Area of Research Concentration (ARCOs). MS students will have general exposure to the two ARCOs, Craniofacial and Dental Genetics (CG) and Craniofacial Tissue Regeneration (CR) through course work and faculty interaction. Each ARCO is supported by a major research center within the DOB: The [Center for Craniofacial and Dental Genetics \(CCDG\)](#) and The [Center for Craniofacial Regeneration \(CCR\)](#). Both paths of study are embedded in a context of Oral Biology and Oral Health training with broad theoretical and interdisciplinary scopes.

2.4. Degree Requirements

Completion of the MS program should take about two years, but no longer than 4 years. Requirements for the MS include

- 30 total credits (28 didactic and 2 in research).
- Successful completion of “Core” foundation classes in the areas of Oral Tissues, Molecular and Developmental Biology, Statistics and Research Design, Craniofacial Embryology and Organogenesis, Craniofacial Anatomy, Craniofacial Regeneration, and Craniofacial Genetic Epidemiology.
- A two-part Successful Career Planning And Development course.
- A Scientific Ethics and the Responsible Conduct of Research course.
- Participation in Seminar/Journal Club all semesters (3 semesters for credit).
- A research project leading to a written Master's Thesis.
- An oral defense of the thesis project.

Students must maintain a minimum, cumulative QPA of 3.00 and receive a B or better in in all required courses to be eligible to graduate.

A total of 30 credits exceed the University requirements of 24 credits for the MS degree. The University mandates that the MS degree work must be completed within a period of 4 years of full-time enrollment (see <http://www.pitt.edu/~graduate/reggeneral.html#limits>). Award of the MS degree for work which has extended beyond the 4-year limit requires special permission of the Graduate Council of the University.

If the student is accepted at a later date into the PhD program, courses taken toward the MS will satisfy doctoral degree credit. The student may petition the Graduate Studies Committee to accept toward the total of 30 credits a maximum number of six credits earned in another

approved graduate school. Likewise, the student may petition the Graduate Studies Committee to accept elective courses taken in another department toward the total of 30 credits.

2.5. Curriculum

The MS program requires a minimum of 30 credits. Formal didactic coursework comprises 28 of these credits, which is further broken down into required and elective courses (see **Table 3** below). The remaining 2 credits are amassed through Research courses.

Generally, a full-time student will be enrolled in a minimum of three formal courses during fall and spring semesters until the required 28 credits of formal coursework is completed.

Table 3: Breakdown of <u>Minimum</u> Number of Total Credits For the MS Program in Oral Biology			
Didactic Courses			28 cr
	Required Courses	27cr	
	Electives Courses	1cr	
Research Courses			2 cr
	Total Credits		30 cr

2.5.1 Required Coursework

Most of the required didactic courses are part of the Oral Biology Basic Sciences Foundation Knowledge Block. The majority of these courses are taken during the first two semesters. A few required courses are small seminar-type courses that were developed especially for the DOB Graduate Program. One course outside the department (*INTBP 2290 - Scientific Ethics and the Responsible Conduct of Research*) will also be required for all MS students. In addition, all students are required to register for the Seminar/Journal Club Course (*ORBIOL 3504*) for their first 3 terms for credit. Following the third term, all MS students are still required to attend and participate in Seminar/Journal Club for every term they are enrolled and present on campus, although they will not receive formal credit.

An overview of courses and MS requirement sequencing is presented in **Table 4**.

2.5.2 Elective Coursework

A variable number of elective courses must be taken to fulfill the didactic course requirements (**Table 3**). At least one elective credit is required for the MS degree, but students are encouraged to take more than the minimum. Electives can be taken from those offered by the DOB faculty or graduate level courses (2000 level or higher) offered outside the School of Dental Medicine (SDM). Electives taken outside the SDM, that will be used to fulfill the didactic course requirement, must be petitioned and approved by the DOB Graduate Studies Committee.

2.5.3. Research Credits

A minimum of 2 credits must be taken in research based classes (*ORBIOL 3505-Directed Research, ORBIOL 3818-Independent Study, or ORBIOL 3511-Thesis Research*) to fulfill the research course requirement (**Table 4**).

Table 4: Overview of Courses and Pathway for the Oral Biology MS Curriculum

Fall Term - 1st Semester		
Course #	Course Title	Number of Credits
ORBIOL 3503	Oral Tissues	3
ORBIOL 3504	Seminar/Journal Club	1
ORBIOL 3516	Foundations Of Successful Career Planning And Development Part 1	1
ORBIOL 3551	Foundations in Development, Genetics, and Biochemistry	2
ORBIOL 3552	Foundations in Statistics, Research Design, and Critical Thinking	3
ORBIOL 3555	Foundations in Embryology and Craniofacial Organogenesis	3
ORBIOL 3505	Directed Research	# credits as needed
Spring Term - 2nd Semester		
ORBIOL 3504	Seminar/Journal Club	1
ORBIOL 3546	Foundations Of Successful Career Planning And Development Part 1	1
ORBIOL 3553	Foundations in Genetic Epidemiology	3
ORBIOL 3554	Foundations in Craniofacial Anatomy	3
ORBIOL 3555	Principles of Craniofacial Skeletal Regeneration	3
ORBIOL 3505	Directed Research	# credits as needed
	Choose Primary Faculty Advisor(s)	
Summer Term - 3rd Semester		
INTBP 2290	Scientific Ethics and the Responsible Conduct of Research	1
ORBIOL 3504	Seminar/Journal Club	1
TBD	Elective	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
	Choose Thesis Committee	
Fall Term - 4th Semester		
TBD	Elective (if needed)	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
Spring Term - 5th Semester		
ORBIOL 3508	Current Topics in Oral Health Research	1
TBD	Elective (if needed)	# credits as needed
ORBIOL 3505	Directed Research	# credits as needed
Summer Term - 6th Semester		

TBD	Elective (if needed)	# credits as needed
ORBIOL 3511	Thesis Research (in graduation term)	# credits as needed
	Defend Thesis	
	Apply for Graduation and Graduation!	

Color Coding Key: **blue** = required didactic courses for all MS students; **orange** = research courses; **green** = elective didactic courses open to all MS students.

2.5.4. Course Grades

Student will be graded by the A+ to F system (letter grade) for all required courses as defined by the Graduate Council of the University of Pittsburgh (<http://www.pitt.edu/~graduate/reggrades.html#defs>). Pass-Fail options may be available for electives and will be determined by the individual course director. Incomplete (“I”) grades will be dealt with by the individual course directors as described in their respective course syllabi.

Students must maintain a minimum, cumulative QPA of 3.00 and receive a B or better in all required courses to be eligible to graduate.

2.6. Student Advising

A temporary faculty advisor will be assigned to each incoming MS student. Temporary faculty advisors will also serve as the directed research advisors (ORBIOL 3505 – **Table 4**) for the first two semesters. At any time after arrival, but not later than the end of the second semester, each new MS student will select a permanent principal advisor (or advisors) with whom to work, and who agrees to serve in this capacity. Until the student selects an advisor, the graduate studies administrator and the temporary faculty advisor will help to provide general advice and to register the student for courses. Students are free to change their advisors at any time. Advisors consult with the students on their course selections and on their research and career plans, and will monitor their advisees' progress in the graduate program. They are also responsible for formally approving their advisees' course programs semester by semester.

2.7 Monitoring Student Progress

Student progress is monitored by the Graduate Studies Committee and the graduate administrator. The progress of all active graduate students will be systematically reviewed by the faculty early in the spring semester. Students should petition the Graduate Studies Committee for formal approval of their thesis committees (see below). After review by the full faculty, students receive written response to their petitions from the Graduate Studies Committee. The graduate administrator will record progress towards advanced degrees. Students are advised to check with the graduate administrator periodically to ensure that their files are up to date.

Students enrolled in the MS program will be reviewed annually by the DOB Graduate Studies Committee. Remediation of Student’s academic under-performance or integrity will be accomplished in compliance with existing policies at the UPSDM and University of Pittsburgh Graduate Studies Office [Academic Integrity](#) and [Code of Conduct](#) Policies (see Section 4).

2.8. Master’s Thesis

Following satisfactory completion of the required course work, the student shall proceed to complete the research requirement for the MS degree.

2.8.1. Thesis Committee

By the end of the first year, the student must establish a thesis committee. The thesis committee will consist of the student's advisor (who will function as the chair of the committee) and at least two additional graduate faculty members from the Department of Oral Biology. Additional graduate faculty members may also be on the committee and may be either from Oral Biology or from another department within the University. The proposed composition of the student's thesis committee, together with the title and one page abstract of the proposed thesis research must be submitted by the major advisor to the Graduate Studies Committee within six months after the choice of a major advisor.

The student's Thesis Committee must meet with the student at least twice a year, at which time the student must submit a progress report and the committee discusses his research project and general progress. The student's Thesis Committee, through the major advisor, must forward a copy of the progress report with accompanying evaluation to the Graduate Studies Committee and to the Director of the Graduate Program following each six-month meeting. A simple majority of the Graduate Studies Committee determines actions of the committee. The student's progress is presented annually to the OB faculty by the Chair of the Graduate Studies Committee.

2.8.2. Master's Thesis Format

The scope of the research project should be carefully planned to ensure completion within a reasonable period of time (as close to the two-semester minimum as possible). MS candidates must be on active status (i.e., must have been registered for a minimum of three credits during a twelve month period) during the execution of their thesis research. During this research period the OB Graduate Program encourages and expects from the MS candidate the same vigorous full-time commitment to the successful completion of the graduate training as it does of PhD candidates.

The student's thesis must provide new knowledge and evidence of original scholarly research of sufficient quality to be published in a leading scientific journal. The Thesis Committee will meet at the time the student's research is ostensibly complete and will authorize the student to begin writing the thesis. The responsibilities of the Master's Thesis Committee are essentially the same as described for the Doctoral Committee.

The style and format of the thesis must conform to the standards set forth by the Graduate Council of the University. The thesis must follow the format set forth in the University of Pittsburgh Library System Electronic Theses and Dissertations (ETD) website (see: <http://www.pitt.edu/~graduate/etd/>). The faculty advisor and one or more members of the Thesis Committee will read preliminary drafts of the thesis and will approve the final draft.

2.8.3. Master's Thesis Defense

The final copy will be submitted to the Thesis Committee at least two weeks prior to the date of the oral thesis defense. The thesis defense must take place at least two weeks before the degree is to be conferred and must take into account additional time necessary to make any required changes to the thesis, get appropriated paper work signed, and upload the document to the ETD. The thesis defense shall consist of an oral presentation of the thesis by the student, followed by the student's response to questions from the floor. This thesis defense, or final examination, is open to the public and will be conducted by the Thesis Committee.

2.9. MS Graduation Requirements

Normally, the semester during which the defense takes place is also the semester during which the student graduates and receives the degree. A formal Application for Graduation must be filed with the Associate Graduate Dean, School of Dental Medicine. **Note that the deadline for submission of the application for graduation generally comes at the beginning of the semester.** Students will be required to submit their Thesis electronically. The Electronic Theses and Dissertations (ETDs) format is available from the University Library System (see <http://www.pitt.edu/~graduate/reggeneral.html#pub>). Students will be responsible for all graduation fees.

All graduate students must be on active status (i.e., must have been registered for a minimum of three credits during a twelve month period) and must register for at least one credit during the semester in which they are graduated. Students who complete all the degree requirements in one semester but are graduated in the next may petition Dr. Heiko Spallek, the Associate Graduate Dean, UPSDM for a waiver of this requirement. A student who is on inactive status must be readmitted and registered for three credits in order to be graduated.

In addition, the following procedures and requirements have been stipulated by the School of Dental Medicine. These requirements must be met before the last day of the semester in which the student has applied for graduation.

- At least one month prior to the defense: Student will make arrangements with the Oral Biology Graduate Program for a final defense date. The information will be relayed to the Associate Graduate Dean, UPSDM in letter-form stating student's name, graduate program, degree sought, title of thesis, date, time and place.
- Each member of the student's Thesis Examining Committee will be given a draft copy of the thesis to prepare for the final defense. One copy of the draft thesis is deposited with the Associate Graduate Dean, UPSDM.
- After the Thesis defense the following should be brought to Dr. Heiko Spallek, the Associate Graduate Dean, UPSDM (as one package). One copy of the final approved Thesis (unbound, with any needed corrections already made). The title page should have the signatures of all Committee Members. Two extra copies of the title page should accompany the thesis. A letter from the Chair of the Oral Biology Graduate Program giving official notice that the candidate has fulfilled all the academic requirements (the change of status and change of grade should accompany this letter). An official receipt [PITT-1453(383)] from the University Cashier (G-7 Thackeray Hall) for payment of thesis binding/microfilming fees is necessary for graduation.

Following approval of the thesis, the MS degree will be granted by the School of Dental Medicine.

2.10. Statute of Limitations

Requirements for the MS degree should be completed within a period of four consecutive calendar years from the student's initial registration for graduate study. Students extending beyond this time period will have to petition the Graduate Studies Committee for reinstatement to the program. Extensions may be granted on a case-by-case basis (see <http://www.pitt.edu/~graduate/reggeneral.html#limits>).

3. INTEGRATION OF FIRST PROFESSIONAL DENTAL STUDENTS AND RESIDENTS

3.1. First Professional Students

Promising First Professional Dental Students and Residents are encouraged to enter the PhD or MS Graduate Programs in Oral Biology. At the present time, the PhD and MS programs in Oral Biology are independent degrees from the First Professional and Resident Graduate programs in the SDM. In the future, we anticipate developing joint/duel-degree programs.

Students in the First Professional Program will follow the normal application and admission instructions and procedures described above. Once accepted into the Oral Biology Graduate Program, and successfully completing Part I of their National Dental Boards, they will be matriculated in the Fall semester of what would be the beginning of their third year of Dental School Training. The First Professional students will take a leave of absence from the Dental School (two years for MS students and three years for PhD students) and enter their graduate training as described above. The students can apply for Advanced Standing and transfer up to 6 credits from their Dental Curriculum as described in the General Regulations section on pursuing [Two Independent Degree Programs Simultaneously](#).

First Professional Dental Students in the graduate program will follow all requirements for the PhD or MS programs described previously. After completion of the didactic portion of the graduate program, the first professional students will join the two month, summer preclinical program done by the advance standing students to review the core preclinical clinical components of first and second year courses to be clinically competent to join the third year class. This noncredit course is required of all PhD or MS first professional trainees before they reenter their clinical training.

It is anticipated that MS students will have completed their research and defended their Theses before they reenter their third year of Dental School. Dental students enrolled in the PhD program will probably still be collecting data and finishing up their Dissertation projects during the last two years of their clinical training. This should not be a problem because third and fourth year Dental Students are given time each semester to take elective courses. First professional students in the PhD program will devote this time to completing their research.

3.2. Dental Residents

Dental Residents interested in the PhD or MS programs in Oral Biology are also encouraged to apply, and if accepted, will be matriculated in the Fall semester of their second year of Residency. Individual arrangements will be made with the different program directors to accommodate these students. The Residents can apply for Advanced Standing and transfer up to 6 (for the MS program) or 24 (for the PhD program) credits from their First Professional Dental Curriculum. If a resident is a graduate from the University of Pittsburgh SDM, only 6 credits can be applied towards the PhD program, as described in the General Regulations section on pursuing [Two Independent Degree Programs Simultaneously](#). Residents entering the Oral Biology Graduate programs will be subject to all requirements and regulations described above.

4. STUDENT CODE OF CONDUCT

4.1. Maintenance of Student Status

Status at the School of Dental Medicine (SDM) for faculty, staff, residents and students is contingent in part on individual compliance with all policies and procedures contained within this manual, in addition to compliance with the [ADA Principles of Ethics and Code of professional Conduct](#). Individual accountability is a responsibility and an expectation. Failure to comply with these policies and procedures will result in progressive corrective actions as follows:

- First Instance: The individual may be counseled at the discretion of the appropriate supervisor or administrator
- First Violation: Written documentation will be placed in the individual's file.
- Second Violation: A final warning will be issued and placed in the individual's file. A written performance improvement plan may be imposed.
- Third Violation: Appropriate sanctions up to and including dismissal or termination of employment will be imposed based on University and SDM policies and procedures for due process related specifically to faculty, staff, residents and students.
- Special Circumstance: For violations that are particularly egregious definitive immediate sanctions will be imposed up to and including dismissal or termination of employment.
- All violations that document student non-compliance will be reported to the respective major advisor who will forward the report to the Associate Graduate Dean, in the Office of Academic Affairs, UPSDM. The Associate Graduate Dean will communicate violation information to the OB Graduate Studies Committee and/or other administration for further action.

4.2. Academic Integrity and Student Code of Conduct

The School of Dental Medicine, as an academic unit of the University of Pittsburgh complies with the University of Pittsburgh Graduate Studies Office [Academic Integrity](#) and Student [Code of Conduct](#) .

4.2.1. Student Obligations

A student has an obligation to exhibit honesty and to respect the ethical standards of the profession in carrying out his or her academic assignments. Without limiting the application of this principle, a student may be found to have violated this obligation if he or she:

- Refers during an academic evaluation to materials or sources, or employs devices, not authorized by the faculty member.
- Provides assistance during an academic evaluation to another person in a manner not authorized by the faculty member.
- Receives assistance during an academic evaluation from another person in a manner not authorized by the faculty member.
- Engages in unauthorized possession, buying, selling, obtaining, or use of a copy of any materials intended to be used as an instrument of academic evaluation in advance of its administration.
- Acts as a substitute for another person in any academic evaluation process.
- Utilizes a substitute in any academic evaluation proceeding.
- Practices any form of deceit in an academic evaluation proceeding.
- Depends on the aid of others in a manner expressly prohibited by the faculty member, in the research, preparation, creation, writing, performing, or publication of work to be submitted for academic credit or evaluation.

- Provides aid to another person, knowing such aid is expressly prohibited by the faculty member, in the research, preparation, creation, writing, performing, or publication of work to be submitted for academic credit or evaluation.
- Presents as one's own, for academic evaluation, the ideas, representations, or words of another person or persons without customary and proper acknowledgment of sources.
- Submits the work of another person in a manner which represents the work to be one's own.
- Knowingly permits one's work to be submitted by another person without the faculty member's authorization.
- Attempts to influence or change one's academic evaluation or record for reasons other than achievement or merit.
- Indulges, during a class (or examination) session in which one is a student, in conduct which is so disruptive as to infringe upon the rights of the faculty member or fellow students.
- Fails to cooperate, if called upon, in the investigation or disposition of any allegation of dishonesty pertaining to a fellow student.
- Violates the [ADA Principles of Ethics and Code of professional Conduct](http://www.ada.org/prof/prac/law/code/ada_code.pdf).
http://www.ada.org/prof/prac/law/code/ada_code.pdf

4.2.2. Procedures for Adjudication

No student should be subject to an adverse finding that he or she committed an offense related to academic integrity, and no sanction should be imposed relating thereto, except in accordance with procedures appropriate for disposition of the particular matter involved. The degree of formality of proceedings, the identity of the decision maker or decision makers, and other related aspects properly reflect such considerations as the severity of the potential sanction, its probable impact upon the student, and the extent to which matters of professional judgment are essential in arriving at an informed decision. In all cases, however, the objective is to provide fairness to the student as well as an orderly means for arriving at a decision, starting first with the individual faculty member and then designated administrative officers or bodies.

These Guidelines are not meant to address differences of opinion over grades issued by faculty in exercising good faith professional judgments of student work. They are meant to address matters in which a faculty member deals with a student regarding an alleged breach of academic integrity. In matters of academic integrity, the succeeding procedural steps must be followed:

- Any member of the University community may bring to the attention of the faculty member a complaint that a student has failed, in one or more respects, to meet faithfully the obligations specified in the above Section 4.2.2. Acting on his or her own evidence, and/or on the basis of evidence submitted to the faculty member, the faculty member will advise the student that he or she has reason to believe that the student has committed an offense related to academic integrity, and the student will be afforded an opportunity to respond. If the accused student and the faculty member accept a specific resolution offered by either of them, the matter shall be considered closed if both parties sign a written agreement to that effect and submit it to the Office of the Dean. The Office of the Dean will maintain a written record of the argument, signed by the student and the faculty member. These records are not to be added to the student's individual file, and they are to be destroyed when the student graduates or otherwise terminates registration. The Office

of the Dean may provide such information on an individual student for the following uses:

- To a faculty member who is involved with a student integrity violation at the initial stage and who wishes to use this previous record in determining whether a resolution between the faculty member and the student or an academic integrity board hearing may be most appropriate, especially in the case of repeat offenders; and
- To the Academic Integrity Hearing Board of an academic unit after a decision of guilt or innocence has been made in a case, but before a sanction has been recommended.
- If an agreed-upon resolution between the faculty member and the student cannot be reached, the faculty member will file a written statement of charges with the appropriate administrative officer. Such statement should set forth the alleged offenses which are the basis of the charges, including a factual narrative of events and the dates and times of occurrences. The statement should also include the names of persons having personal knowledge of circumstances or events, the general nature and description of all evidence, and the signature of the charging party. If this occurs at the end of a semester, and/or the last semester of enrollment, the "G" grade should be issued for the course until the matter is decided.
- In situations involving the student's last semester before graduation, degree certifications can be withheld pending the outcome of the hearing, which should be expedited as quickly as possible.
- The dean's designated academic integrity hearing officer will transmit the written statement of charges to the student, together with a copy of these regulations.
- The letter of transmittal to the student, a copy of which shall also be sent to the faculty member or charging party, will state a time and place when a hearing on the charges will be held by the Chair of the Academic Integrity Hearing Board.
- In proceedings before the academic unit's Academic Integrity Hearing Board, the student shall have the right:
 - to be considered innocent until found guilty by clear and convincing evidence of a violation of the student obligations of academic integrity;
 - to have a fair disposition of all matters as promptly as possible under the circumstances;
 - to elect to have a private or public hearing;
 - to be informed of the general nature of the evidence to be presented;
 - to confront and question all parties and witnesses except when extraordinary circumstances make this impossible;
 - to present a factual defense through witnesses, personal testimony, and other relevant evidence;
 - to decline to testify against himself or herself;
 - to have only relevant evidence considered by the Academic Integrity Hearing Board;
 - to have a record of the hearing (audio tape), at his or her own expense, upon request.
- The hearing should provide a fair inquiry into the truth or falsity of the charges, with the charged party and the faculty member or charging party afforded the right to cross-

examine all adverse witnesses. At the level of the academic unit's Academic Integrity Hearing Board, legal counsel shall not be permitted, but a non-attorney/law student representative from within the University community shall be permitted for both faculty and students. A law student cannot be used as a representative at the Academic Integrity Hearing Board.

- Any member of the University community may, upon showing relevancy and necessity, request witnesses to appear at the hearing. Witnesses who are members of the University community shall be required to appear, and other witnesses shall be requested to appear, at a hearing. When necessitated by fairness or extraordinary circumstances, the Chair of the Academic Integrity Hearing Board may make arrangements for recorded or written testimony for use in a proceeding.
- **Hearing Procedure:** The hearing will be conducted as follows:
 - the Chair of the Academic Integrity Hearing Board will not apply technical exclusionary rules of evidence followed in judicial proceedings nor entertain technical legal motions. Technical legal rules pertaining to the wording of questions, hearsay, and opinions will not be formally applied. Reasonable rules of relevancy will guide the Chair of the Academic Integrity Hearing Board in ruling on the admissibility of evidence. Reasonable limits may be imposed on the number of factual witnesses and the amount of cumulative evidence that may be introduced;
 - the alleged offense or offenses upon which the complaint is based shall be read by the Chair of the Academic Integrity Hearing Board;
 - objections to procedure shall be entered on the record, and the Chair of the Academic Integrity Hearing Board shall make any necessary rulings regarding the validity of such objections;
 - the charging party shall state his or her case and shall offer evidence in support thereof;
 - the accused or representative(s) for the accused shall have the opportunity to question the charging party;
 - the charging party shall be given the opportunity to call witnesses;
 - the accused or representative(s) for the accused shall be given the opportunity to question each witness of the charging party after he or she testifies;
 - the charging party shall inform the Chair of the Academic Integrity Hearing Board when his or her presentation is completed, at which time the Academic Integrity Hearing Board members shall be given an opportunity to ask questions of the persons participating in the hearing;
 - the Academic Integrity Hearing Board shall recess, and the Chair of the Academic Integrity Hearing Board shall make a determination as to whether the charging party has presented sufficient evidence to support a finding against the accused, if such evidence is uncontroverted. The parties may be required to remain in the hearing room during the recess or may be excused for a time period set by the Chair of the Academic Integrity Hearing Board;
 - depending upon the determination of the Chair of the Academic Integrity Hearing Board, the matter shall be dismissed or the accused shall be called upon to present his or her case and offer evidence in support thereof;
 - the accused may testify or not as he or she chooses;

- the charging party shall have the opportunity to question the accused if the accused voluntarily chooses to testify;
 - the accused or representative(s) for the accused shall have the opportunity to call witnesses;
 - the charging party shall have the opportunity to question each witness of the accused after he or she testifies;
 - the accused shall inform the Chair of the Academic Integrity Hearing Board when his or her presentation is complete, and the Academic Integrity Hearing Board members shall have an opportunity to ask questions of the accused as well as the accused's witnesses;
 - the Chair of the Academic Integrity Hearing Board shall have an opportunity to address the hearing board on University regulations or procedure in the presence of all parties, but shall not offer other comments without the consent of all parties; and,
 - the hearing shall be continued and the members of the Hearing Board shall deliberate in private until a decision is reached and recorded.
- A suitable record (audio recording) shall be made of the proceedings, exclusive of deliberations to arrive at a decision.
 - The proposed decision, which shall be written, shall include a determination of whether the charges have been proved by clear and convincing evidence, together with findings with respect to the material facts. If any charges are established, the proposed decision shall state the particular sanction or sanctions to be imposed. Prior violations or informal resolutions of violations may be considered *only* in recommending sanctions, not in determining guilt or innocence. Once a determination of guilt has been made, and before determining sanctions, the Chair of the Academic Integrity Hearing Board should find out from the appropriate dean(s) whether prior offenses and sanctions imposed have occurred.
 - The proposed decision shall be submitted to the dean, who will make an independent review of the hearing proceedings. The dean may require that the charges be dismissed, or that the case be remanded for further proceedings whenever he or she deems this to be necessary. Upon completion of such additional proceedings, if any, and within a reasonable time the dean shall issue a final decision. The dean may reject any findings made by the Academic Integrity Hearing Board adverse to the student, and may dismiss the charges or reduce the severity of any sanction imposed, but the dean may not make new findings adverse to the student or increase the severity of a sanction, except in the case of repeat offenders of the Academic Integrity Guidelines.
 - The Chair of the Academic Integrity Hearing Board shall then transmit to the charged party and the faculty member copies of all actions taken by the Academic Integrity Hearing Board and the dean. If a sanction is imposed, the notice to the student will make reference to the student's opportunity, by petition filed with the provost, to appeal to the University Review Board.

4.2.3. Timeline

It is the responsibility of all parties, including administrative officers, to take prompt action in order that charges can be resolved quickly and fairly. Failure of the faculty member to utilize these procedures diligently may constitute grounds for dismissal of charges. Parties have

the right to seek review by the Provost or to petition the University Review Board for an appeal from a decision of an Academic Integrity Hearing Board or investigatory committee within five (5) working days of the date of the decision letter.

4.2.3. Sanctions

The alternative sanctions which may be imposed upon a finding that an offense related to academic integrity has been committed are the following:

- Dismissal from the University without expectation of readmission.
- Suspension from the University for a specific period of time.
- Reduction in grade, or assignment of a failing grade, in the course in which the offending paper or examination was submitted.
- Reduction in grade, or assignment of a failing grade, on the paper or examination in which the offense occurred. Individual academic units can add other sanctions approved by the dean of the academic unit and the Provost. Such sanctions must be made known to students.

In administering sanctions, academic units must strive to achieve consistency in their application. That is, within the same units, the same sanctions should be applied for the same offenses, unless extenuating circumstances can be documented, e.g., the student is a repeat offender.

The imposition of such sanctions may be considered by the academic unit in the preparation of any report concerning a student submitted to a government agency, accrediting body, or other person or institution in accordance with the requirements of law or the written consent of the student.

4.2.4. Academic Integrity Hearing Board

The Academic Integrity Hearing Board shall be composed of both faculty and students and consist of: Two students and four faculty members who do not hold administrative appointments. The two students shall be ASDA president and the president of the same class as the student. The dean shall appoint the four faculty members and choose one of them to chair the board. Faculty appointment shall be for a three-year semester, renewable for one additional semester.

In electing or appointing members to the Academic Integrity Hearing Board, emphasis should be placed on obtaining faculty members with expertise and/or concerns related to academic integrity matters. Regardless of the selection process, it is the responsibility of the dean to provide all new Academic Integrity Hearing Board members with an orientation designed to familiarize the new members with the academic integrity guideline for the given unit. Hearing Board members should be elected or appointed in a way to ensure continuity of membership as well as an orderly turnover of the membership.

4.2.5. Review and Appeal

A student or faculty member may seek to have a dean's final decision (or a determination that the charges are not subject to adjudication) reviewed by the Provost, who may seek the advice of the University Review Board, or the student may appeal to the University Review Board, whose recommendation shall be made to the Provost. The action of the Provost, taken with or without the advice of the University Review Board, shall constitute an exhaustion of all required institutional remedies.

5. STANDING COMMITTEES

5.1. Department of Oral Biology Graduate Studies Committee

Mark P. Mooney, PhD (Chair)
Chair, Department of Oral Biology
Director, Oral Biology Graduate Program

Mary L. Marazita, PhD
Director, Center for Craniofacial and Dental Genetics

Charles Sfeir, DDS, PhD
Associate Dean of Research
Director, Center for Craniofacial Regeneration

Alexandre R. Vieira, DDS, PhD
Director, Dental CTRC

Elia Beniash, PhD
Chair, Oral Biology Graduate Curriculum Committee

5.2. Oral Biology Graduate Curriculum Committee

Elia Beniash, PhD (Chair)

Alejandro Almarza, PhD

Manika Govil, PhD

Mark P. Mooney, PhD

Juan Taboas, PhD

Seth M. Weinberg, PhD

5.3 DOB Graduate Handbook created, edited, and updated by:

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