

Status: PENDING

PROGRAM REQUEST
Dentistry-ORALBIO-PHD

Last Updated: Myers,Dena Elizabeth
01/24/2011

Fiscal Unit/Academic Org	Dentistry - D2100
Administering College/Academic Group	Dentistry
Co-administering College/Academic Group	
Semester Conversion Designation	Converted with minimal changes to program goals and/or curricular requirements (e.g., sub-plan/specialization name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content)
Current Program/Plan Name	
Proposed Program/Plan Name	Dentistry-ORALBIO-PHD
Program/Plan Code Abbreviation	ORALBIO-PH
Current Degree Title	Doctor of Philosophy

Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program		120	80.0	80	0.0
Required credit hours offered by the unit	Minimum	21	14.0	16	2.0
	Maximum				
Required credit hours offered outside of the unit	Minimum	20	13.3	14	0.7
	Maximum				
Required prerequisite credit hours not included above	Minimum	0	0.0	0	0.0
	Maximum	0	0.0	0	0.0

Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

Program Learning Goals

Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? Yes

Does the degree program or major have an assessment plan on file with the university Office of Academic Affairs? No

DIRECT MEASURES (means of assessment that measure performance directly, are authentic and minimize mitigating or intervening factors)

Direct assessment methods specifically applicable to graduate programs

- Candidacy exams
- Research proposals written and grants awarded
- Thesis/dissertation oral defense and/or other oral presentation
- Thesis/dissertation (written document)
- Publications

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INDIRECT MEASURES (means of assessment that are related to direct measures but are steps removed from those measures)

Surveys and Interviews

- Student evaluation of instruction

Additional types of indirect evidence

- External program review

USE OF DATA (how the program uses or will use the evaluation data to make evidence-based improvements to the program periodically)

- Meet with students directly to discuss their performance

Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

Pre-Major

Does this Program have a Pre-Major? No

Attachments

- Dent_PHD_DeansLetter.pdf
(Letter from the College to OAA. Owner: Kestner,Susan Gail)
- Dent_PhD_CurrOverview.docx
(List of Semester Courses. Owner: Kestner,Susan Gail)
- Dent_PhD_GeneralStatements.docx
(Other Supporting Documentation. Owner: Kestner,Susan Gail)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Kestner,Susan Gail	01/24/2011 09:39 AM	Submitted for Approval
Approved	Kestner,Susan Gail	01/24/2011 09:45 AM	Unit Approval
Approved	Kestner,Susan Gail	01/24/2011 09:46 AM	College Approval
Approved	Myers,Dena Elizabeth	01/24/2011 09:53 AM	GradSchool Approval
Pending Approval	Soave,Melissa A	01/24/2011 09:53 AM	CAA Approval



College of Dentistry

Office of Academic Affairs
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January 2011

Office of Academic Affairs
The Ohio State University
203 Bricker Hall
190 North Oval Mall
Columbus, OH 43210-1358

RE: Semester Conversion PhD and PhD/DDS Programs submission for the College of Dentistry

To Whom It May Concern:

As instructed by the Office of Academic Affairs we are providing information in regards to the semester conversion process for the College of Dentistry. Currently the academic programs offered in the College of Dentistry include; the Pre-doctoral Dental Program ("DDS"), the Dental Hygiene Program ("DHY"), the combined DDS and Doctoral Program ("DDS/PhD"), the Masters Programs ("MS") and the Doctoral Program in Oral Biology ("PhD"). There currently are no College-wide components that are common to all proposed programs.

This letter is specifically to accompany the submission of the semester conversion plan for the PhD and PhD/DDS Programs

Summary of the Review and Planning Process for the PhD and PhD/DDS Programs

There are two academic programs in the College of Dentistry which award the PhD degree: the single-degree PhD Program and the Dentist Scientist Graduate Program. The single degree PhD Program includes an approximate five-year study leading to a PhD in Oral Biology. The Dentist Scientist Graduate Program is a seven-year program leading to the combined DDS/PhD degree. The seven year program integrates PhD training into the existing DDS Program curriculum. The DDS Program has been submitted in a separate program proposal. The Dental Scientist Graduate Program is currently supported by a T32 grant from the National Institute of Dentistry and Craniofacial Research (NIH).

The Oral Biology PhD Program faculty, examined the current internal and external courses and initiated a semester transition process to equivalently transition quarter courses to semester courses with minimal alteration of content. As the majority of courses in the PhD Program are taught outside the unit, we investigated the transition of these external courses in their respective units. The large majority were equivalently transitioned to semester so the content of the track curriculum in our program required no substantial changes.

Transition Plan and Policy

The College of Dentistry is aligned with the OSU Office of Academic Affairs pledge to students that the shift from quarters to semesters does not disrupt progress toward their degrees.

Since there is flexibility in scheduling PhD curriculum requirements and most students complete their required courses in one year, students should experience a relatively smooth semester transition process. If problems arise with individual students, the program will work diligently to resolve these conflicts on an individual basis. There are a relatively small number of students enrolled in the Dentist Scientist Graduate Program and their academic schedules are individually supervised by administrative staff in the College of Dentistry so any conflicts they encounter as a result of semester transition can be easily managed as well.

By our signatures below, we both indicate our approval of the semester conversion plan being submitted for the PhD and PhD/DDS Degree Programs and we respectfully recommend that they be approved by OAA and the CAA.

If any additional information is needed please, feel free to contact us.

Sincerely,



Carole A. Anderson, PhD
Dean, College of Dentistry



Cheryl H. DeVore, RDH, MS, JD
Associate Dean of Academic Affairs and Graduate Studies

College of Dentistry
PhD Oral Biology and DDS/PhD Program
Semester Conversion Documentation

January, 2011

Program Background and Description

The Oral Biology PhD Program, which began in 1991, is the sole doctoral-degree awarding program within the College of Dentistry. There are two academic programs in the College of Dentistry which award the PhD degree: the single-degree PhD program and the Dentist Scientist Graduate Program.

The single degree PhD Program includes an approximate five-year study leading to a PhD in Oral Biology. The first two years is heavily oriented towards didactic courses and research laboratory rotations. Students will usually take their candidacy exam at the end of the second year and spend the last two years of the program focused on their dissertation work.

Every student is expected to complete a required core curriculum which includes approximately 16 credit hours and complete at least 14 additional credit hours from one of six "selective" tracks. These tracks include:

1. Human Pathobiology
2. Neuroscience
3. Inflammation and Immunity
4. Molecular, Cell, and Developmental Biology
5. Biomaterials and Hard Tissues
6. Clinical Research with a dual focus on human biology and epidemiological/statistical methods

During the first two years of their program, students will also enroll in a Laboratory Rotation course. Students will typically also earn additional credit hours in Journal Club (Dent 7920). A completion of 80 credit hours (including research hours) is required by the Graduate School for completion of the PhD degree. In the Oral Biology PhD Program, typically half of these 80 credit hours will consist of dissertation activities. Successful completion of the candidacy exam and dissertation defense is also required for graduation.

The Dentist Scientist Graduate Program is a seven-year program leading to the combined DDS/PhD degree and is currently supported by a T32 grant from the National Institute of Dentistry and Craniofacial Research. The seven year program integrates PhD training into the DDS Program curriculum. Approximately 8 students are currently enrolled in this combined program. During the first year of the program students typically take the traditional first year DDS Program courses. During the second year, students take a few of the required second year DDS Program courses however they also begin some of the PhD

course work. During years three and four students focus entirely on their PhD courses and research activities. Year five involves taking the remaining traditional second year DDS Program courses while completing most of the PhD program requirements. Years six and seven are spent following the final two years of the DDS Program which includes an emphasis on clinical practice. The DDS Program has been submitted in a separate program proposal.

Scheduling

The College of Dentistry currently schedules 50 minute didactic classes which begin on the hour (or half hour). Students have a ten minute break between classes. The College would like to maintain this schedule (700 minutes/didactic credit hour), although they will comply with a 53 minute class period if directed by the University. This would result in students having shorter breaks between class periods. It is important that schedules run on the hour (or half hour) to accommodate clinic schedules which impact almost all programs and students in the College. The PhD Program courses offered through the College of Dentistry also request to follow this same clock schedule. After discussions with students and faculty, we believe that greater scheduling conflicts will arise if we do not follow the same schedule as the majority of the other College of Dentistry academic programs. There will be considerable flexibility in scheduling the limited number of required PhD courses offered by the College. In addition, due to the relatively small number of students enrolled in these program, accommodations can be made fairly easily if conflicts arise.

Program Assessment

The Graduate Program participated in the review of Graduate Programs conducted by the Graduate School in 2008. It received the second highest overall rating.

The Dentist Scientist Graduate Program is currently funded by the National Institute of Dentistry and Craniofacial Disorders and participates in a biennial External Review. Its previous reviews have all been favorable.

Transition Process

The Oral Biology PhD Program has examined its internal and external courses and initiated a semester transition process to equivalently transition quarter courses to semester courses with minimal alteration of content. As the majority of courses are taught outside the unit, we investigated the transition of these external courses in their respective units. The large majority were transitioned to semester so the content of the track curriculum in our program required no substantial changes.

Credit Hour Comparisons

The courses offered in the Oral Biology PhD Program have approximately transitioned along a two-thirds conversion rate. The total number of credit hours required for graduation is in line with the standard set by the Graduate School.

Program credit hour requirements		A	B	C	D
PhD Program		Number of credit hours in current program (Quarters)	Calculated result for 2/3rds of current credit hours	Number of credit hours required for proposed program (Semesters)	Change in credit hours
Total minimum credit hours required for completion of program (INCLUDES RESEARCH HOURS)		120	80	80	0
Total minimum credit hours required for completion of program EXCLUDING RESEARCH HOURS		41	28	30	2
Required credit hours offered by the unit	Minimum	21	14	16	2
	Maximum				
Required credit hours offered outside of the unit	Minimum	20	13	14	1
	Maximum				
Required prerequisite credit hours not included above	Minimum	0	0	0	0
	Maximum	0	0	0	0

Transition Policy

The College of Dentistry is aligned with the OSU Office of Academic Affairs pledge to students that the shift from quarters to semesters does not disrupt progress toward their degrees.

Since there is flexibility in scheduling PhD curriculum requirements and most students complete their required courses in one year, students should experience a relatively smooth semester transition process. Where problems arise with individual students, the program will work diligently to resolve these conflicts on an individual basis. There are a relatively small number of students enrolled in the Dentist Scientist Graduate Program and their academic schedules are individually supervised by administrative staff in the College of Dentistry so any conflicts they encounter as a result of semester transition can be easily managed as well.

COLLEGE OF DENTISTRY ORAL BIOLOGY PhD COURSES

Generally, the PhD program in Oral Biology is four to five years. The first two years is heavily oriented towards didactic courses and research laboratory rotations. Students will usually take their candidacy exam at the end of the second year and spend the last two years of the program focused on their dissertation work.

Every student is expected to complete a required core curriculum which includes approximately 16 credit hours and complete at least 14 additional credit hours from one of six “selective” tracks (listed below). During the first two years of their program, students will also enroll in the Laboratory Rotation course. Students will typically also earn additional credit hours in Journal Club (Dent 7920). A completion of 80 credit hours (including research hours) is required by the Graduate School for completion of the PhD degree. In the Oral Biology PhD Program, typically half of these 80 credit hours will consist of dissertation activities. Successful completion of the candidacy exam and dissertation defense is also required for graduation.

Required courses

Dent 7920	Oral Biology Seminar	1 – 2 credit hours per term (students need to earn a minimum of <u>3 credit hours</u> from this course number, however, they are also required to be enrolled every term it is offered so, the probability exists that they will earn more than the 3 credit hour minimum)
Dent 8840	Current Issues in Oral Biology	2 credit hours per term (students must enroll in this course a minimum of two times for a minimum of 4 TOTAL credit hours)
Stat 5301 Stat 5302	Data analysis I Data analysis II	4 credit hours 3 credit hours
Pharm 751 (old number – new number not yet assigned)	Professional and Ethical Issues in Biomedical Science	2 credit hours

Additional courses

Dent 7910	Oral Biology Journal Club	1 – 2 credit hours per term
Dent 8901	Oral Biology Laboratory Rotations	.5-10 credit hours per term
Dent 8999	Research for Dissertation	.5-10 credit hours per term

Students must also complete a minimum of 14 credit hours from one of the following six curriculum tracks. Students may select these credits from the courses listed below:

1) Human Pathobiology

- Biology of Human Disease I IBGP 7010 10 credit hours
- Biology of Human Disease II IBGP 7010 10 credit Hours

2)	Neuroscience		
	• Neuroscience I	Neurosci 7001	6
	• Neuroscience II	Neurosci/Dent 7256	6
	• Neurobiology of Disease	Neurosci/Pharm 7050	3
	• Seminar in Neuroscience	NeuroGSP 7886	1
	• Neuroimmunology	MVIMG 7500	2
	• Neurodevelopment	NeuroSci 7900	2
	• Neuropharmacology	Pharm 8500	3
	• Behavioral Neuroscience	Psych 7260	3
	• Cellular Mech. and Pathogenesis of Inflammation	MVIMG 8470	3
	• Biology of the tumor Microenvironment	NGSY 8250	3
3)	Inflammation and Immunity		
	• Evolution of Emerging Viruses	MVIMG 6000	2
	• Eukaryotic Pathogens	Micro 5147	3
	• Cellular and Molecular Immunology	MVIMG 7010	3
	• Principles of Neuroimmunology	MVIMG 7500	2
	• Molecular Biology and Pathogenesis of Viruses	MVIMG 7741	5
	• Viral Pathogenesis and Oncogenesis	MVIMG 8410	3
	• Cellular Mechanisms and Pathogenesis of Inflammation	MVIMG 8470	2
	• Selected Topics in Advanced Immunology	MVIMG 8010	3
	• Developmental Biology	IBGP 7020	3
	• Bioinformatics Applied to Human Disease	IBGP 7050	1
	• Research Techniques and Resources	IBGP 8050	4
	• Animal Models of Human Disease	IBGP 7810	1
4)	Molecular, Cell, and Developmental Biology		
	• Molecular Genetics,	MGen 5605	4
	• Genes and Development	MGen 5608	3
	• Advanced Molecular Genetics	MGen 6701	4
	• Human genetics	MGen 6733	2
	• Bioinformatics Applied to Human Disease	IBGP 7050	1
	• Animals Models of Human Disease	IBGP 7810	1
	• Biochemistry and Molecular Biology III	Biochem 5615	3
	• Eukaryotic Genome, Structure and Expression	Biochem 831	
5)	Biomaterials and Hard Tissues		
	• Biomedical Microscopic Imaging	BME 5110	
	• Advanced Biomaterials	BME 5310	
	• Hard-Tissue Biomaterials	BME 5353	
	• Mechanobiology	BME 5420	
	• Tissue Mechanics	BME 5421	
Other courses:			
	• Biomedical Optics	BME 5120	
	• Biomedical Ultrasound	BME 5186	
	• BioInterfacial Phenomena & Surface Functionalization	BME 5320	
	• Biopolymer Structure and Function	BME 5359	

	• Finite Element Analysis Applications in BME	BME 5430	
6)	Clinical Research*		
	• Research Techniques and Resources	IBGP 8050	4
	• Cellular and Molecular Immunology	MVIMG 7010	3
	• Cellular Mechanisms and Pathogenesis of Inflammation	MVIMG 847	3
	• Molecular Pathogenesis	MBIOL 7724	3
	• Design and Analysis of Studies in the Health Sciences I	PUBH-BIO 6210	3
	• Design and Analysis of Studies in the Health Sciences II	PUBH-BIO 6211	3
	• Principles of Epidemiology	PUBH-EPI 6410	3

**This coursework is flexible and will vary with the research interests of the trainee. A hallmark of this track is a dual focus on human biology and epidemiological/statistical methods. The courses listed above are appropriate for a focus on research related to periodontal antimicrobial chemotherapy, but specialized coursework can be developed for other clinical disciplines.*

From: [Sue Kestner](#)
To: [Soave, Melissa](#); [Ashok K Krishnamurthy](#)
Subject: College of Dentistry semester conversion proposals
Date: Friday, April 22, 2011 4:09:44 PM
Attachments: [Dent_SubComClarify_April2011.doc](#)

Dr. Krishnamurthy: I have attempted to address the points the sub-committee requested clarification for in the attached document. After you have had time to review the materials, please let me know if they are acceptable or if you would like additional information. I am copying Melissa Soave from OAA on this e-mail so that she also has a record of the information.

Melissa: If additional materials are required from your perspective, please let me know.

Sue Kestner
College of Dentistry

The College of Dentistry submitted semester conversion materials in January 2011 to the Office of Academic Affairs for the four degree programs it offers:

1. Bachelor of Science in Dental Hygiene
2. Doctor of Dental Surgery
3. Master of Science
4. PhD in Oral Biology

The Council on Academic Affairs Sub-committee ('A' - Drs; Alexander, Krishnamurthy, Lang and Wilkins) reviewing our proposal asked for clarification on some items. I met personally with them on April 20, 2011. At that time, they asked me to provide written clarification in regard to three items. The specifics of this information can be found in the attached document (Dent_SubComClarify_April2011). **Please let me know if any additional information is required.**

1. **DDS Program** – Tables were included in our original submission materials in regard to the credit hours in our current quarter program and the proposed credit hours for our semester program. In reviewing the credit hours in our current program, we realized that some of our courses (primarily clinic) had credit hours calculated incorrectly. The sub-committee asked us to provide a clearer representation (explanation) of this.
2. **PhD Program** – In addition to offering a PhD degree, the College offers a program through which students can obtain both a DDS degree and a PhD degree in seven years. During this seven year period, students complete the required course work for these programs in an integrated schedule. The sub-committee asked us to provide a visual representation of this schedule. In addition, there appeared to be some confusion regarding whether or not this was an official “dual-degree” program. As we understand it, this is not an official “dual-degree” program. Students receive the DDS degree and the PhD degree independently.
3. **MS Program** – As indicated in our original submission materials, the MS Program in the College of Dentistry has a major focus on specialty dental practice training. The American Dental Association has strict accreditation standards for these programs and students in these programs have significant patient care responsibilities. Overview illustrations of the 8 program tracks were submitted with our original materials (Dent_MS_CurrOverview) however, the sub-committee did not seem to have received this information. In addition, the sub-committee had questions regarding the repeated use of some course numbers for terms of varying length. Several of these situations related to courses that include activities occurring during

the month of May. One issue that was particularly problematic in regard to converting these programs from quarter to semester formats was the May term. At the time that our materials were first submitted, there were still some issues that were not fully resolved in regard to how the May term would be managed for these programs. Fortunately, we now have a clearer picture of how we will administratively schedule courses that include activities during the month of May and as a result, we are able to update our curriculum overviews illustrating fewer courses with the same number listed in terms of varying length – this update has been included in the attached document. These changes are administrative in nature and do not impact program content or requirements.

April 22, 2011
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College of Dentistry
PhD Degree Program

As a part of the College of Dentistry semester conversion materials submitted to the Office of Academic Affairs in January, 2011, it was indicated that the college offered a “combined DDS/PhD degree”. That information requires further clarification which is described below.

The OSU College of Dentistry has been a recipient of a training grant from the National Institute of Dental and Craniofacial Research which supports the training of clinician-scientists and cumulates in the student participants receiving both a DDS (or DMD) degree and a PhD which will prepare them to pursue careers in basic biomedical or clinical research. This training grant provides students with funding for tuition waivers and stipends. These students do not receive an official “dual degree” from Ohio State University, rather they receive each degree individually.

At OSU, this program has been designed to integrate the DDS and PhD degree course work over a seven year period.

1	During the first year, students typically take the traditional first year DDS Program courses
2	During the second year, students take a few of the required second year DDS Program courses (those primarily with a basic or behavioral science focus) however they also begin some of the PhD course work.
3-4	During years three and four students focus entirely on their PhD courses and research activities
5	Year five involves taking the remaining traditional second year DDS Program courses which are typically focused on clinical skills while completing most of the PhD program requirements
6-7	Years six and seven are spent following the final two years of the DDS Program which includes an emphasis on clinical practice. A typical schematic of this structure is shown below.

As a part of this program, students may elect to receive their PhD degree from one of following areas:

- Oral Biology (College of Dentistry)
- Neuroscience Graduate Studies (College of Medicine)
- Integrated Biomedical Science (College of Medicine)

Since a fairly small number of students participate in this training grant, their schedules are individually planned by the grant program director from the College of Dentistry so that any scheduling conflicts can be easily resolved. A typical schedule is illustrated in color on the next page.

OSU College of Dentistry Dentist Scientist Graduate Program (Combined DDS & PhD program)				
	May Term	Summer Term	Autumn Term	Spring Term
Year 1			DDS Program - Year 1 Autumn Term	DDS Program - Year 1 Spring Term
Year 2	Dent 6500 Histology & PHD COURSES	Dent 6532 Occlusion II & PHD COURSES	Dent 6600 Human Physiology Dent 6571 Pharmacology Dent 6262 Communications & Ethics in Dentistry & PHD COURSES	Dent 6655 General Pathology & PHD COURSES
Year 3	Dent 6544 Internal Medicine Dent 6413 Integrated Basic Science Review & PHD COURSES	PHD COURSES	PHD COURSES	PHD COURSES
Year 4	PHD COURSES	PHD COURSES	PHD COURSES	PHD COURSES
Year 5	PHD COURSES	Dent 6545 Oral Radiology Dent 6536 Operative Dentistry II Dent 6434 Fixed Restorative Dent 6434 Dental Laboratory Review & PHD COURSES	Dent 6564 Periodontology I Dent 6656 Orthodontics I Dent 6516 Pediatric Dentistry I Dent 6482 Removable Complete Prosthodontics I Dent 6535 Fixed Restorative Dentistry III Dent 6690 Introduction to Clinical Dentistry III & PHD COURSES	Dent 6505 Oral Surgery I Dent 6579 Local Anesthesia Dent 6489 Removable Partial Prosthodontics I Dent 6630 Diagnosis & Treatment Planning Dent 5639 Fixed Restorative Dentistry IV (Competency) Dent 6538 Operative Dentistry III (Competency) Dent 6565 Periodontology II Dent 6567 Endodontics I Dent 6691 Introduction to Clinical Dentistry IV & PHD COURSES
Year 6	DDS Program - Year 3 May Term (do not need to re-take Dent 6544 or 6413)	DDS Program – Year 3 Summer Term	DDS Program – Year 3 Autumn Term	DDS Program – Year 3 Spring Term
Year 7	DDS Program - Year 4 May Term	DDS Program – Year 4 Summer Term	DDS Program – Year 4 Autumn Term	DDS Program – Year 4 Spring Term