

Status: PENDING

PROGRAM REQUEST
Biophysics

Last Updated: Myers, Dena Elizabeth
06/16/2011

Fiscal Unit/Academic Org	Division Of Sensory Biophysics - D0321
Administering College/Academic Group	Arts And Sciences
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	Biophysics
Proposed Program/Plan Name	Biophysics
Program/Plan Code Abbreviation	BIOPHYS-MS
Current Degree Title	Master of Science

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		45	30.0	30	0.0
Required credit hours offered by the unit	Minimum	6	4.0	3	1.0
	Maximum	6	4.0	3	1.0
Required credit hours offered outside of the unit	Minimum	26	17.3	19	1.7
	Maximum				
Required prerequisite credit hours not included above	Minimum				
	Maximum				

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

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

- Biophysics MS letter1.pdf: letter
(Letter from the College to OAA. Owner: Hauser,Susan Jeanne)
- BiophysicsSemesterConversionMasters.pdf: statement
(Program Rationale Statement. Owner: Hauser,Susan Jeanne)

Comments

- Although I have been told that the Academic Unit Sensory Biophysics is obsolete - this is where Biophysics currently resides in SIS.

Note, that while the total number of required credit hours has simply undergone the 2/3 conversion, a small shift has occurred between credit hours offered by the program and credit hours offered by other units. Thus, the change in credit hours appears in column D above.

Since the course work requirements in our program are identical between the PhD and the MS degree, we submit identical conversion plans for these two programs. *(by Hauser,Susan Jeanne on 06/14/2011 09:58 AM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Hauser,Susan Jeanne	06/15/2011 10:53 AM	Submitted for Approval
Approved	Breitenberger,Caroline Anna	06/15/2011 04:14 PM	Unit Approval
Approved	Andereck,Claude David	06/15/2011 04:19 PM	College Approval
Approved	Myers,Dena Elizabeth	06/16/2011 03:58 PM	GradSchool Approval
Pending Approval	Cameron,Erin Marie Soave,Melissa A	06/16/2011 03:58 PM	CAA Approval



College of Pharmacy

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May 31, 2011

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

RE: MS in Biophysics

Dear Office of Academic Affairs:

On behalf of the Biophysics Interdisciplinary Graduate Program, I am pleased to recommend for approval the Program Plan for the Master of Science in Biophysics degree. This submission contains the details of the Master's program conversion only. The PhD program is submitted separately.

The Biophysics program co-directors led the process of conversion for the graduate degrees. This committee coordinated and approved the course and program changes. Input was gathered widely from course directors, students, and faculty. The proposed curriculum was formally approved by the Biophysics Graduate Studies Committee in May 2011.

Should you have any questions or concerns, please feel free to contact me directly.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Brueggemeier".

Robert W. Brueggemeier, Ph.D.
Lead Dean, Interdisciplinary Graduate Programs in Life Sciences

Dean, College of Pharmacy
Professor, Medicinal Chemistry

Interdisciplinary Biophysics Graduate Program

Program Rationale

The rationale for semester conversion of the Interdisciplinary Biophysics Graduate Program is to keep the transition as smooth as possible with minimal changes. Since the Biophysics program only offers one course of its own, program requirements are defined in terms of credit hour limits for courses offered by other departments. Thus, conversion of the program essentially requires a determination of the planned semester course that will replace each existing quarter course, as well as a change of the credit hour limits from quarter credit hours to semester credit hours. The course information, taken from our current data from the departments, is listed in the conversion table included in this document. The rest of the program rationale statement discusses every program rule that refers to quarters and how it will be transitioned with minimal impact to semesters.

Total credit hours in foundation courses: The quarter system rules require that students take a total of 20 quarter credit hours from a specific set of “foundation” courses, which are offered by various departments. We will use the designations provided by the offering departments to compile the list of semester courses that correspond to the current quarter courses (please see the table below for information collected up to this point). To convert to a semester system, we will simply require a total of 14 semester credit hours of foundation courses, which is obtained by multiplying 20 by $2/3$ and rounding up to 14. The quarter system rules also require that 17 of these 20 quarter credit hours of foundation be taken by the end of the first year, which allows for one three credit hour course to be postponed to the second year. In the same spirit we will require that 11 of the 14 semester credit hours of foundation courses be taken by the end of the first year.

Total credit hours in foundation plus core courses: Our current quarter system rules require that students take a total of 32 quarter credit hours from the foundation courses mentioned above plus a specific (and long) list of “core” courses, which are again offered by various departments. Once all departmental course offerings are finalized, we will use the designations provided by the offering departments to compile the list of semester courses that correspond to the current quarter courses, (please see table below for information collected up to this point). Under the semester system, we will require a total of 22 semester credit hours from foundation plus core courses, which is obtained by multiplying 32 by $2/3$ and rounding up to 22.

One year introduction to Biophysics series: The quarter system rules require students to take the one year (three quarter) Introduction to Biophysics series. Under the semester format, this requirement will be replaced by an equivalent two semester series.

Biochemistry class: The quarter system rules require that students take at least one of several possible Biochemistry classes, depending on the student's existing proficiency in Biochemistry. This requirement will remain the same under semester conversion. The Biochemistry classes used to fulfill this requirement will be extracted from the offering departments' declarations of the equivalent semester courses that are to replace the existing quarter courses.

Mentoring seminar: Under the current quarter system, students from all of the Life Sciences Interdisciplinary Graduate Programs, including Biophysics, are required to take a mentoring seminar that is currently listed by the Biochemistry program (BiochemP) . Under the semester system, the same mentoring seminar will be required, but the new course will be cross-listed between all IGPs.

Rotations: The current quarter system rules require that each student complete three 10 week lab rotations during the first year, one for each quarter. Under the semester system, students will be required to complete three 7 week rotations, two during fall semester, and one during the first half of spring semester. This would leave the second half of spring semester available for a possible fourth rotation if needed, or for the student to go ahead and join a lab to get started on their thesis research. Since the first rotation in Fall semester will be only seven weeks (compared to 10 under the quarter system), it will be essential to provide students with the necessary information to choose a lab well ahead of time, so that they can get started during the first week.

Interdisciplinary Biophysics Graduate Program

Departmental courses

The next pages contain a complete list of the courses taught by different units all across campus currently accepted as foundation or core courses and their semester equivalents.

Biophysics Courses

Courses	# Units	Semester changes	New call number
Anatomy 700	Human Histology 4 units		6700
Biochem 511	Intro to Biol. Chem. 4 units	Will become a 1 semester course, same # units	4511 fixed
Biochem 521	Biochem Mol Bio Lab 4 units	Will add 4 weeks of lab. No substantial change except for scheduling. Plan is to run two sections concurrently each semester, instead of one section now.	5621 fixed
Biochem 613	Biochem & Molec. Biol. 1 3 units	Moving to a three semester sequence	5613 fixed
Biochem 614	Biochem & Molec. Biol. 2 3 units		5614 fixed
Biochem 615	Biochem & Molec. Biol. 3 units		5615 fixed
Biochem 702	Gene Expression 4 units		6701
Biochem 706	Adv. Biol. Chem Lab 4 units		6706 fixed
Biochem 708	Protein & Enzyme Lab 5 units		Discontinued
Biochem 710	Molec. Biol. Lab 5 units		Discontinued
Biochem 721 .01	Physical Biochem I 3 units		5721 fixed
Biochem 721.02 WI	Physical Biochem II 3 units		5722 fixed
Biochem 721.03	Phys Biochem. III 3 units		5722 fixed
Biochem 735/ 736	Plant Biochem. 3 units		6735 fixed
Biochem 762	Adv. Biochem: Enzymes 1.5 units		6762 fixed
Biochem 763	Adv. Biochem:		6763 fixed

	Membranes 1.5 units		
Biochem 765	Adv. Biochem: Phys. Biochem. 3 units		7765 fixed
Biochem 766 WI	Adv. Biochem: Nucleic Acids 3 units	Combine 766/761	6761
Biochem 770 AU	Protein Engineering		7770
Biochem 900	Adv. Topics in Biochem.		8990 variable
Biomed Eng 611	Fund. Biomed Microscopic Imag 3 units		5110
Biomed Eng 686	Intro to Biomed Ultrasound 3 units		5186
Biomed Eng.701	Survey of Cardiovascular Bioengineering 3 units		5001
Biomed Eng 721	Nothing		
Biomed Eng 732	Soft Tissue Biomaterials 3 units		5352
Biomed Eng 990	Not a standard course – place held for Special Topics		
Biophysics 702	Adv. Experimental Methods 3 units	variable	6702
Biophysics 789 – see description below.	Free Radicals In Biomedicine 3 units	fixed	6789
Biophysics 795		variable	6795
Biochem & Molec Biol. 613, 614, 615	4 units	Moving to a 3 semester sequence; optimally 613 in Sp of 2 nd yr; 614 and 615 in AU and SP of following year	
Biochem & Molec Biol 761			
Biostatistics 615	2 units		6615
Biostatistics H318 Intro SU	No longer exists	Stats 2480 may be a suitable replacement	discontinued

Cell Biology 607	3 units	Will be offered as a 3 semester credit hour course at 5000 level	5607
Chemistry 661.01	Biochemistry		Discontinued
Chemistry 661.02	Biochemistry		Discontinued
Chem. 673 Intro	Intro to Quantun Chem & Spec	7 week course – grad student enrollment	6510
Chem 733 WI	Chem of Bio-Organic Catalysts & Enz	7 week course	7220
Chem. 763 SP	Adv. Biochem: Membranes & Bioenergetics	7 week course	6240
Chem 823	Analytical Spectroscopy	3 units	7120
Chem 824	Nuclear Magnetic Resonance Spec	3 units	7140
Chem 861-863 Au,Wi, Sp	Quantum Chem I, II, and III	Quantum Mech & Spect 6510 1.5 units Adv. Molec Quantum Mec & Spectro 6530 1.5 u	6510 and 6530
Chem. 866 SP	Spectra & Structure of Molecules	3 units	7520
Chem. 875 AU			
Chem. 876	Chemical Dynamics	3 units	7540
Chem 880	Stat Thermodynamics	3 units	7530
Chem 881			
Chem 882			
Chem 944	Computational Chem.	1.5 units	7450
Computer Science 541	Elementary – Numerical Methods 3 units		CSE5361
CSE 560	Systems Software Design, Develop, and Documentation 4 units		3901/3902 Students are expected to take one of these.
CSE 625	Intro to Automata & Formal Language 2 units		5321
CSE 640	Numerical Analysis		NONE
CSE 642	Numerical Linear Algebra		NONE
CSE 670	3 units Introduction	2 semester hours	5241

	to Database Systems I 2 units		670 and 671 are merged into one.
CSE 671	Intro to Database Systems II 2 units		5241 670 and 671 are merged into one.
CSE 680	3 units Introduction to Analysis of Algorithms	2 semester hours	CSE5331
CSE 681	Intro to Computer Graphics		None. The closest to 581 & 681 is 5541
CSE 725	Computability & Unsolvability 3 units		5322
CSE 727	Computational Complexity		Combined with 725 5322
CSE 780	Analysis of Algorithm 3 units		5332
CSE 781	Intro to 3D Image Generation 3 units		Combine 781 and 782 5542
CSE 782	Adv. 3D Image Gen 3 units		Combins 781 and 782 5542
CSE 784	Geometric Modeling 3 units		5543
ECE 707	Digital Imaging 3 units		5460
ECE 711	Radiation from antennas 3 units		5011
ECE 719	Electromagnetic field theory I 3 units		6010
ECE 863	Computer Vision 3 units		7866
Electrical Eng 517	Electromagnetics Lab ½ unit		3017
Electrical Eng. 557	Electromagnetic Lab 1 unit	Will become a 1 credit lab	3557
Electrical Eng 600	Intro to Digital Signal Processing 3 units	Will be combined with 801.01 into a new 5000 level course to grads and undergrads	Combined with 801.01 is becoming 5200

Electrical Eng. 650	Intro to Estimation 3 units	Will be combined with 750 and 755 to make a new 5000 level course	Combined with 750 and 755 is becoming 5551
Electrical Eng 706	Medical Imaging 3 units	Will expand to a semester course, and will still be offered both in distance mode and regular	5206
Electrical Eng 716	Optics with Laser Light DISCONTINUED	DISCONTINUED – The closest thing to this course would be ECE 5132 Photonics. Syllabus is attached.	There will be a couple new photonics/optics courses, one in nonlinear optics and one called Phototonics and the course number is 5511 – Nonlinear Optics.
Electrical Eng 732	Quantum Electron Devices: Lasers 3 units	Will expand to a semester course	5131
Engineering CSE 541	Elem. Numerical Methods	Elementary Numerical Methods	5361
IBGP 705	Integrated Bioscience Grad Program		7050
IBGP 730	Biomed Informatics I		7300
IBGP 731	Biomed Info II		7310
Mathematics 568	Intro to Linear Algebra 3 units		2168
Mathematics 601	Principles in Science 3 units		5101
Mathematics 602	Principles in Science 3 units		5101-5102
Mathematics 603	Principles in Science 3 units		5101-5102
MCB 762			6762
MCB 764	Adv Biochem: Integration of Metabolism		7764
MCB 824	Enzymology	Nothing listed	
Microbiology 520, 521	Gen. Microbiology I and II 5 units	Will be combined into a single 4 semester lecture and	Microbiology 4100

		lab	
Microbiology 522.02	Immunology Advanced Lab 3 units		Microbiology 4140
Micro 571	Not listed 5 units		
Micro 581.01	Lecture 3 units		Microbiology 4130
Micro 581.02	Genetics lab course	Will be combined with M522.02 Immunology into a single advanced lab	Microbiology 4140
Microbiology H610	Bioinformatics and Molec Microbiol. 3 units		Microbiology 5161H
MIVMG 804	Instrumentation and Techniques in Molec Virology, Immunology and Cancer Genetics		8040
Molec & Cellular Biochem 761	Adv. Biochem: Proteins 3 units		6761
Molec& Cellular Biochem 764	Adv Biochem: Integration of Metabolism 2 units		6764
Molec& Cellular Biochem 781	Animal Models of Human Disease 1 unit		7781
Molec & Cellular Biochem 785	DNA Microarray Tech 1 unit		6785
Molec& Cell Biochem. 823	Control of Cell Growth and Proliferation 2 units		7823
Molec & Cell Biochem 831 WI	Eukaryotic Genome: Structure and Expression 2 units		7831
Molec. Gen. 500	General Genetics 3 units		4500
Molec. Gen. 605 WI	Molec. Genetics I 4 units	605 and 606 are combined and convert to 5606.	5606

		There is some discussion that it should be covered to 4606.	
Molec. Gen. 606 SP	Molec. Genetics II 4 units	See above	
Molec. Gen. 607 AU	Cell Biology 3 units	MG will also offer a 5607E version with 4 unit hours	5607
Molec. Gen. 705	Adv in Cell Biology 2 units		6705
Molec. Gen 733	Human Genetics 2 units		6733
Neuroscience 702	Intro to Topics in Cell Biophysics 3 units	DISCONTINUED	
Neuroscience 716	Not listed Georgia Bishop is contact	DISCONTINUED	
Neuroscience 723 and 724	Cellular and Molecular Neurobiology 6 units	Combined into one course	7001
Organic Chem 253	The current 251, 252, 253 will become 2510. Chem 4 units	2510 will be all 251 and part of 252. 2520 will be the rest of 252 and all of 253	2510 and 2520
Pharmacy 616	Med applications of Radionuclides and Radiopharmaceuticals 2 units		5160
Pharmacy 735	Drug Discovery and Drug Design 2 units		7350
Pharmacy 802	Pharmacokinetics 4 units – 3 units		8020
Pharmacy 808	Pharmacokinetic-Pharmacodynamic Models – 2 units		8080
Pharmacy 870 + Pharmacy 871	Molecular Pharmacology of Drug Receptor Interactions – 4 units		8700
Phys. Biochem. 721.01; 721.02; 721.03		Will be consolidated into two semesters, with	2 semester series. 1 st semester 5721 2 nd semester 5722

		the first one covering mainly thermodynamics and kinetics, and the second handling the rest.	
Physics 555	Int Elec & Magnetism		5400
Physics 616	Math & Phys Sci		5700
Physics 617	Electronics for Physics		5701
Physics 655	Grad Holography I	Grad Holography	6455
Physics 631-633	Intro Quantum Mech I, II & III	Quantum Mech	5500
Physics 656	Interm Elec & Magnetism		5400
Physics 657	Field & Waves III		5401
Physics 780.20	Topics: Elem. Particle Phys. – 4 units	BP	6802, 6809, 6810, 6820
Physics 801	Seminar – 1 unit		
Physics 846	Stats Phys I	Not listed	
Physics 847	Stats Phys II	Not listed	
Physics 848	Adv Stat Physics		7603
Physics 866	Not found		
Physics 880.20	Special Topics		8809
Physiology 601	Organ System Physiology I 3 units		6101
Physiology 602	Organ System Physiology II 3 units		6102
Physiology 795	Nothing shown		
Plant Biology 630	Plant Physiology 3 units	630 and 631 combined	6630
Plant Biology 631	Plant Physiology 3 units		6630
Psychology 806	Survey of Behavior Neuroscience I Will become two semester courses		6806
Psychology 807	Survey of Behavior II		6807 – plus 808
Psychology 808	Survey of Behavior III		
Statistics 427	Intro to Probability and Statistics for Eng	Converting to a single 3-hour course	3460

	and the Sci I	There are two versions 3460 and 3470	
Statistics 428	Intro to Probability and Statistics for Eng and Sci II 3 units	Converting to a single 3-hour course	3470
Statistics 520	Math Statistics I 4 units	Converting to a single 4-hour course	6201
Statistics 521 Not been run for several years.	Math Statistics II	Have either Stat 4201-4202 that fills the gap	6201
Statistics 641	Design & Analysis of Experiments 4 units	Changing to a 4-hour course	6410
Statistics 645	Applied Regression Analysis 4 units	Changing to a 4-hour course	6450
Vet Biosci 700 Professional students only	Applied Functional Neuroanatomy I 2 units of credit	Focused on their professional curriculum. Questions forwarded to	7700.
Vet Biosci 701	Discontinued	DISCONTINUED	
Vet Biosci 790	Comparative Cardiovascular Physiology 2 units of credit		7790
Vet Biosci 791	Heart Sounds, Murmurs and Pulse Curves	DISCONTINUED	
Vet Biosci 792	Signs, Symptoms, and Treatment of Cardiopulmonary Disease 2 units of credit		7792
Vet Biosci 640	Fundamentals of Oncology 4 units of credit		6640

Interdisciplinary Biophysics Graduate Program

Comments on Advising Sheets

Students enter the Interdisciplinary Biophysics Graduate Program with a very wide array of backgrounds ranging from Biochemistry, Biology and Physiology to Bioengineering, Chemistry, Physics, Mathematics, and Computer Science. The research interests of our students are quite broad ranging from understanding the dynamics of nanometer sized biomolecules on the scale of trillionths of seconds to imaging of entire patients. In order to take our students from where they come from to where they want to go, our curriculum is very flexible. Due to the small number of students (around ten per year with the 2011 incoming class being only six students strong) it is feasible to design each students' curriculum individually in consultation with one of the two co-directors. Due to the very different preparations, the advising sheet does not list a number of courses that have to be taken but rather a (large) number of proficiencies expected of a student at the end of their course work. Every student will have covered several of these already in their undergraduate course work, although different students will have covered different proficiencies. Thus, the advising sheet is a guide to identifying which areas have been covered during undergraduate degrees and which have to be covered by graduate course work. Hence, the only change to the advising sheet is the change from "quarter" to "semester" in the row that refers to the Introduction to Biophysics series. It should be pointed out that although the advising sheet spoke of "2 quarters" in practice, this became a 3 quarter series a few years ago and will now be trivially converted to a 2 semester series.

Interdisciplinary Biophysics Graduate Program

Semester advising sheet

Appendix A Ohio State University Biophysics Student Pre-Contract.

This is a statement that describes the way in which I have completed or I intend to complete the **minimum general course** requirements for a Ph.D. in Biophysics at Ohio State University.

Name: _____

Admission Date: _____

Requirements	Description	Student Plan
Physics	Through particles and waves, quantum mechanics and thermodynamics	
Mathematics	Through differential and integral calculus	
Chemistry	Through inorganic, organic chemistry and physical chemistry	
Biology	General biology, microbiology, botany or animal physiology	
Computer skills I	Familiarity with programming in a modern language or experience with equivalent software.	
Computer skills II	Word processing, statistical, graphics, and presentation, literature searching software	
Biochemistry	A complete graduate level biochemistry course or equivalent	
Biophysics	Two quarters of introductory Biophysics or equivalent	
Laboratory Course	Laboratory course or experience in biochemistry, molecular biology, electronics, etc. depending on area	
Scientific Ethics	Scientific integrity, plagiarism, authorship, etc.	
Grantsmanship	Background in grant writing techniques and approaches	
Statistics	Basic statistical approaches to handling scientific data.	
Lab Internships	Minimum of 3 required	
Spoken, written Eng. Requir.	Applies to non-domestic students only	

Ohio State University Biophysics Student Pre-Contract (cont.)

The Biophysics training track that most closely describes my current primary research direction interests is _____

The Biophysics track that is the next closest description or an area I am also interested in is _____

I have discussed my planned curriculum with the following three faculty within the Biophysics Program _____

Interdisciplinary Biophysics Graduate Program

Quarter advising sheet

Appendix A Ohio State University Biophysics Student Pre-Contract.

This is a statement that describes the way in which I have completed or I intend to complete the **minimum general course** requirements for a Ph.D. in Biophysics at Ohio State University.

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Admission Date: _____

Requirements	Description	Student Plan
Physics	Through particles and waves, quantum mechanics and thermodynamics	
Mathematics	Through differential and integral calculus	
Chemistry	Through inorganic, organic chemistry and physical chemistry	
Biology	General biology, microbiology, botany or animal physiology	
Computer skills I	Familiarity with programming in a modern language or experience with equivalent software.	
Computer skills II	Word processing, statistical, graphics, and presentation, literature searching software	
Biochemistry	A complete graduate level biochemistry course or equivalent	
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Spoken, written Eng. Requir.	Applies to non-domestic students only	

Ohio State University Biophysics Student Pre-Contract (cont.)

The Biophysics training track that most closely describes my current primary research direction interests is _____

The Biophysics track that is the next closest description or an area I am also interested in is _____

I have discussed my planned curriculum with the following three faculty within the Biophysics Program _____

Interdisciplinary Biophysics Graduate Program

Semester conversion transition policy

The Biophysics Graduate Program will ensure that no student will be negatively affected by the transition to semesters. This document specifies how this guiding principle will be implemented for every relevant rule of the Biophysics Graduate Program:

Total credit hours in foundation courses: The quarter system rules require a total of 20 quarter credit hours from foundation courses. The semester system rules require a total of 14 semester credit hours from foundation courses. For students that joined the program before summer 2012 their acquired quarter credit hours of foundation courses will be multiplied with $\frac{2}{3}$ to obtain the equivalent semester credit hours. Any semester credit hours earned from summer 2012 on will be added to this converted amount. A transition student has fulfilled this requirement if this sum exceeds 13.3 semester credit hours.

Total credit hours in foundation plus core courses: The quarter system rules require a total of 32 quarter credit hours from foundation plus core courses. The semester system rules require a total of 22 semester credit hours from foundation courses. For students that joined the program before summer 2012 their acquired quarter credit hours of foundation courses will be multiplied with $\frac{2}{3}$ to obtain the equivalent semester credit hours and any semester credit hours earned from summer 2012 on will be added to this converted amount. A transition student has fulfilled this requirement if this sum exceeds 21.3 semester credit hours.

One year introduction to Biophysics series: Both sets of rules require students to take the one year (three quarters or two semesters respectively) introduction to Biophysics series. All students are required to take this course at the latest during their second year; thus, all students currently enrolled will have fulfilled this requirement at the time of conversion. The 2011 class of students will be strongly advised to take the full series during their first year (the class comprises only six students). Should a student not be able to take one or two of the quarters during the 2011/2012 academic year he/she will be required to take one of the two semesters during the 2012/2013 academic year. The student will obtain the appropriately higher semester credit hours toward foundation courses when replacing a quarter course in 2011/2012 by a semester course in 2012/2013.

Biochemistry class: Both sets of rules require taking at least one of several possible Biochemistry classes. This requirement does not pose any problem with semester conversion. Students that have not taken any Biochemistry class under quarters are required to take one under semesters. Different possible classes already now contribute different credit toward the foundation courses and the appropriate credit will be applied based on the quarter or semester credit hours the actual classes are listed under.

Mentoring seminar: Both sets of rules require taking the mentoring seminar which is jointly offered by the life sciences interdisciplinary graduate programs. This requirement does not pose any problem with semester conversion. Students that have not taken the mentoring seminar under quarters are required to take it under semesters.

Rotations: Both sets of rules require three rotations in faculty labs. These rotations have to be finished during the first academic year. Thus, 2011 (or earlier) students have to finish this requirement under quarters and 2012 (or later) students have to finish this requirement under semesters. In the unlikely case that a student is admitted mid-academic year 2011/2012, the student will have to still finish three rotations no matter if these are the 10 week rotations in the quarter systems or the 7 week rotations in the semester system.

Interdisciplinary Biophysics Graduate Program

Concurrence letter

In order to document concurrence, the deans of the colleges with faculty who are members of the Biophysics Graduate Program have co-signed the submission letter from lead dean Robert Brueggemeier.



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500 West 12th Avenue
Columbus, OH 43210-1291

Phone (614) 292-5711
Fax (614) 292-3113
E-mail Brueggemeler.1@osu.edu

May 31, 2011

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

RE: MS in Biophysics

Dear Office of Academic Affairs:

On behalf of the Biophysics Interdisciplinary Graduate Program, I am pleased to recommend for approval the Program Plan for the Master of Science in Biophysics degree. This submission contains the details of the Master's program conversion only. The PhD program is submitted separately.

The Biophysics program co-directors led the process of conversion for the graduate degrees. This committee coordinated and approved the course and program changes. Input was gathered widely from course directors, students, and faculty. The proposed curriculum was formally approved by the Biophysics Graduate Studies Committee in May 2011.

Should you have any questions or concerns, please feel free to contact me directly.

Sincerely,

Robert W. Brueggemeler, Ph.D.
Lead Dean, Interdisciplinary Graduate Programs in Life Sciences

Dean, College of Pharmacy
Professor, Medicinal Chemistry

Catherine R. Lucey, MD FACP
Interim Dean and Vice Dean for Education
The Ohio State University College of Medicine

Joseph E. Steinmetz, PhD
Executive Dean and Vice Provost
College of Arts and Sciences

Carole A. Anderson, PhD
Dean
College of Dentistry

Lonnie J. King, DVM, MS, MAP, ACVPM
Dean
College of Veterinary Medicine

David B. Williams
Dean, College of Engineering