Brothers, Sheila C.

From: Smith, William T.
Sent: Monday, March 30, 2020 1:50 PM
To: Brothers, Sheila C.
Subject: change to PhD and MS in Epidemiology

Hey Sheila,

Proposal Name: Proposed Change to PhD Epidemiology

This is a recommendation that the University Senate approve the College of Public Health request to change the PhD requirements for the program in Epidemiology and Biostastistics.

Rationale: The proposed changes by the College of Public Health reflect the program wanting to streamline the choice of electives and to reduce the overall total required credit hours to make the program more competitive with peer institutions. The proposal also notes that some of the reduction is based on them only admitting master's students, most of which have had many of the omitted courses.

William T Smith, Associate Professor
Dept of Electrical and Computer Engineering
(859) 257-1009

CHANGE DOCTORAL DEGREE PROGRAM FORM

GENERAL INFORMATION

College:	Public Health	Department:	Epidemiology
Current Major Name:	Epidemiology/Biostatistics	Proposed Major Name:	no change
Current Degree Title:	Ph.D.	Proposed Degree Title:	no change
Current Formal Option(s):	None	Proposed Formal Option(s):	None.
Current Specialty Fields w/in Formal Option:	na	Proposed Specialty Fields w/in Formal Option:	na

Date of Contact with Associate Provost for Academic Administration[1]:	1/22/19				
Bulletin (yr & pgs):	_____	CIP Code[1]:	26.1309	Today's Date:	11/21/2018
Accrediting agency (if applicable):	Council on Education for Public Health (CEPH)				
Requested Effective Date:	☒ Semester following approval.	OR	☐ Specific Date[2]:	_____	
Dept Contact Person:	Steve Browning	Phone:	218-2235	Email:	srbrown@uky.edu

CHANGE(S) IN PROGRAM REQUIREMENTS

	Current	*Proposed*
1. Number of transfer credits allowed:	Per the Graduate School, the maximum that can be transferred is 18 credit hours from a previously awarded master's degree and 9 credit hours otherwise.	*no change*
(Maximum is Graduate School limit of total of 9 hours (or 25% of the credit hours needed to fulfill the pre-qualifying residency requirement.)		
2. Residence requirement:	2 years before and 1 year after qualifying examination	*no change*
(Minimum of one year before and after Qualifying Exams.)		
3. Language(s) and/or skill(s) required:	na	*no change*
4. Provisions for monitoring progress and termination criteria:	Cumulative grade point average of 3.00 or above; no grade of "E" or "U"; at most one grade of "I" remaining to be resolved; at most one grade of "C"; at most one grade of "W"; comprehensive examination passed at PhD level if taken; qualifying examination passed if taken; final examination passed if taken; Graduate School time limits not exceeded.	*Cumulative grade point average of 3.00 or above; no grade of "E" or "U"at the conclusion of the pre-residency stage of the degree; at most one grade of "I" remaining to be resolved; at most one grade of "C"; at most one grade of "W"; comprehensive examination passed at PhD level if taken; qualifying examination passed if taken; final examination passed if taken; Graduate School time limits not exceeded.*

[1] Prior to filling out this form, you MUST contact the Associate Provost for Academic Administration (APAA). If you do not know the CIP code, the APAA can provide you with that during the contact.

[2] Programs are typically made effective for the semester following approval. No program will be made effective until all approvals are received.

CHANGE DOCTORAL DEGREE PROGRAM FORM

5. Total credit hours required:	58	*38*
6. Required courses:	CPH 663 (3); CPH 712 (3); BST 675 (4); BST 681 (3); CPH 786 (1); EPI 714 (3); BST 676 (4); BST 682 (3); EPI 715 (3); BST 761 (3); BST 762 (3); CPH 711 (3); CPH 767 (4) plus 18 hours of electives	*BST 682, BST 762,EPI 714, EPI715, EPI 717, CPH 786 (1 credit for 4 semesters), CPH 767 (4 credits for 2 semesters) for a total of 23 credit hours+ 15 credit hours of electives. CPH 663 (1) is required for those without a prior public health degree.*
7. Required distribution of courses within program:	+ BST 675, BST 681, BST 676, BST 682, BST 761, CPH 712, EPI 714, and EPI 715 prior to comprehensive examination; core curriculum (39 credits) prior to qualifying examination	*BST 682, BST 762, EPI 714, EPI 715, EPI 717, CPH 786 (1 credit for 4 semesters) prior to comprehensive examination. Core curriculum (excluding residency credits (23-4=19 credits)+15 credit hours of electives for a total of 34 credits is needed prior to qualifying examination. Four credits after residency yields 38 total hours*
8. Minor area or courses outside program required:	na	na
9.Distribution of courses levels required (400G-500/600-700):	maximum of 6 credit hours at 400G/500 level, remaining courses at 600/700 level.	*no change*
10. Qualifying examination requirements:	Require the student to furnish the dissertation committee with a written dissertation document in progress (minimum 2 weeks in advance) as well as to prepare slides for an oral presentation describing the student's current progress and the student's proposal to complete the dissertation research (approximately 20-30 slides). During and after the oral presentation, the dissertation committee may ask the student questions about the content of the written dissertation document in progress, the oral presentation, and topics in epidemiology and biostatistics deemed relevant to evaluation of the student's competence to complete the dissertation research. The possible outcomes are Pass and Fail.	*no change*

11. Explain whether the proposed changes to the program (as described in numbers 1 through 10) involve courses offered by another department/program. Routing Signature Log must include approval by faculty of additional department(s).

All courses for the PhD program are offered by the Departments of Epidemiology and the Departments of Biostatistics in the College of Public Health.

12. Other requirements not covered above:

Masters Degrees are required for admission (ie: MS in Statistics or MPH in Biostatistics or Equivalent with Linear

regression, calculus, statistical inference and probability requirements completed as part of masters; or MPH in Epidemiology or MS in Epidemiology or Equivalent with basic biostatistics and epidemiology/advanced epidemiology completed as part of masters).

13. What is the rationale for the proposed changes? If the rationale involves accreditation requirements, please include specific references to those requirements.

The proposed changes streamline the program with regard to the choice of electives which correspond better to the academic preparation and interests of two distinct groups of students (Biostats or Epi), reduce the need for students with prior master's degrees to retake similar courses, align the program with similar doctoral degrees from benchmark schools, and reduce the overall total credit hours required to make the program more competitive.

Synopsis of Proposed Changes to the Ph.D. Program in Epidemiology and Biostatistics

Now that the Ph.D. program has been running for seven years, we have some insights into how better to meet the students' needs, and so we propose the following modifications.

1. BST 675 (Biometrics1), BST 676 (Biometrics 2), BST 681 (Linear Regression) , and BST 761 (Time to Event) will no longer be required. These classes are generally already taken by students with a prior masters in statistics and often in epidemiology. Students will need to take necessary prerequisites for the core classes in the current curriculum if they have not done so in a prior degree within the past 8 years. CPH 711 (Chronic Epidemiology) will be removed as a required course but remain as an elective for students. Ph.D. students are capable of beginning immediately with CPH 712 (Advanced Epidemiology) if they do not have a prior background in Epidemiology. In this case, CPH 712 will count as a DGS-approved free elective. Students without a prior background in epidemiology who have not taken an introductory epidemiology course (CPH 605) may do so ; however, this will not count toward credits for the degree.

2. The doctoral seminar course CPH 786 must now be taken for 4 semesters. This increase is in-line with PhD program requirements at benchmark institutions, was recommended by a recent site review, and may enhance interaction and exposure of doctoral students to diverse faculty and methods. The seminar will have a different faculty member and series of topics each semester and coverage willl be a shared responsibility of both departments.

3. In response to recent program reviews, we have added additional courses as program electives and several of these will be encouraged by the DGS and advisors . These courses include CPH 713 (Pharmacoepidemiology) , BST 763 (Categorical Data Analysis), BST 761 (Time to Event Analysis) , BST (693 Statistical Practice in Public Health). Also, BST 760 (Advanced Regression) will be discontinued and replaced by BST 681 (Linear Regression) and BST 682 (Generalized Linear Models).

4. CPH 663 (Introduction to Public Health Practice and Administration) was recently approved as a 1 credit hour course for students in the program not having a prior public health degree, in accord with accreditation requirements.

5. Teaching Assistantships (TA) and Graduate Research Assistantships (GRA) are strongly encouraged by the program and efforts will be made to place students in accord with interest and ability in these positions. It is recognized that a substantial number of our students are also employed at the University and elsewhere for this program and have different levels of preparation. These decisions are made on an individual basis between the DGS, Department Chairs, and program faculty.

6. These changes are also made to reflect current offerings in the Departments of Epidemiology and Biostatistics such that the sequencing of the courses will allow the student to complete the course work requirements, excluding the qualifying exam and residency in a two year time period.

The proposed changes are summarized by the following prototypical plan for a full-time student.

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Fall Semester (Year 1)
BST 682 Generalized Linear Model (3)
EPI 717 Causal Inference (3)
_____Biostat or Epi elective (3)
CPH 786 Doctoral Seminar (1)

Spring Semester (Year 1)
BST 762 Longitudinal Data Analysis (3)
EPI 714 Study Design (3)
EPI 715 Advanced Methods in Epidemiology and Biostatistics (3)
CPH 786 Doctoral Seminar (1)

Fall Semester (Year 2)
_____ Biostat Elective (3)
_____ Epidemiology Elective (3)
BST 761 Time to Event (3)
CPH 786 Doctoral Seminar (1)

Spring Semester -Year (2)
BST 763 Categorical Data Analysis (3)
___Biostat Elective (3)
___Free Elective (3)
CPH 786 Doctoral Seminar (1)

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August 30, 2019

To the Faculty Senate Council:

As requested by Ms. Sheila Brothers, I am providing some additional details and curriculum tables on the proposed program change to the PhD program in Epidemiology and Biostatistics as it impacts the credit hours and curriculum.

The proposal will change the minimum credit hours required for graduation from 58* in the original program to 38 under the new proposal. This has already been approved by our graduate program faculty, the Academic Affairs Committee of our College, the Faculty Council of our College, and HCCC.

The primary reason for the reduction in credit hours is to remain competitive as a PhD program and bring the credit hour requirement in line with benchmark programs. In addition, since we are now only admitting master's degree recipients to the program, many of the required prerequisites for study in this program are filled by their master's degrees. Further, students often transfer in between 9 and 18 credits toward the residency requirements from a prior degree. The courses being eliminated from the current core (in yellow) are often taken in master's programs and thus the new program will reduce the need (also) for substitutions and transfer credit requests. Students who do not have this previous coursework can still take these classes if needed as prerequisites or review.

The new program proposal reflects changes in course numbers and offerings over the last several years, adds a new course (CPH 718: Causal Analysis) to incorporate newer methods needed in the field, and offers more flexibility in electives as our students tend to pursue "tracks" in either epidemiology or biostatistics. Finally, we increase the offering of the number of doctoral seminars (as suggested from student input) to provide more opportunities for flexibility in the curriculum with new materials, exposure to diverse presenters, and opportunity for interdisciplinary collaboration.

Below, I provide a table of the coursework requirements under the current program as published in our student handbook and the Graduate Bulletin and then the proposed new curriculum.

Current Program.

Students will complete a minimum of 56 credit hours of study including dissertation research and the corresponding residency credits. Yellow= classes removed as required in new program; Green=classes remaining as required.

Required Courses

#BST 675 Biometrics I..... 4
#BST 676 Biometrics II..... 4
BST 681 Linear Regression 3
BST 682 Generalized Linear Models 3
BST 761 Time to Event Analysis..... 3
BST 762 Longitudinal Data Analysis 3
*CPH 663 Introduction to Public Health Practice
& Administration 1
CPH 711 Chronic Disease Epidemiology..... 3
CPH 712 Advanced Epidemiology 3
CPH 786 Doctoral Seminar..... 1
EPI 714 Epidemiologic Study Design 3
EPI 715 Research Methods in Epidemiology & Biostatistics..... 3

College of Public Health - Department of Epidemiology
111 Washington Avenue, Suite 213
Lexington, KY 40536-0003

Tele: (859) 218-2330
Fax: (859) 257-8811
www.mc.uky.edu/publichealth/

Subtotal: Required Hours 33-34

Electives
Subtotal: Elective Hours **18-21**

Residency Credit

CPH 767 Dissertation Research Credit (semester 1) 2
CPH 767 Dissertation Research Credit (semester 2) 2
Subtotal: Residency Hours **4**

Total Minimum Hours Required for Degree **56**

When the BST 675 and BST 676 courses were no longer taught, we substituted STA 524 (3) and STA 525 (3) and then added 2 credits of independent study to the curriculum to preserve hours. The minimum credit hours needed for those with a prior master's was 55 credits under the old program since the CPH 663 class was not required.

Proposed New EPB program curriculum.

Common Core Courses (23 credit hours).

Credit hours	Class Number	Description
3	BST 682	Generalized Linear Models
3	BST 762	Longitudinal Data Analysis
3	EPI 714	Epidemiologic Study Design
3	EPI 715	Advanced Methods in Epidemiology and Biostatistics
3	EPI 717	Causal analysis
1 X 4	CPH 786	Doctoral Seminar (4 semesters)
2	CPH 767	Residency
2	CPH 767	Residency
Total = 23		
		+ 15 Elective hours in the track (from below) = 38 hours + 1 credit CPH 663 (if needed) = 39 hours

Recommended Electives (Need 15 credit hours)

3	BST 761	Time to Event (Survival) *
3	BST 763	Categorical Data Analysis *
3*	CPH 712	Advanced Epidemiology (if needed as prerequisite)
3	CPH 713	Pharmacoepidemiology
3	BST 693	Statistical Practice in Public Health
3		Other Biostat 700 course
3		Other Epi 700 course
3		Free Elective in Epi, Bio, other COM, A&S or Indep Study

It is worth noting that Teaching Assistantships (TA) and Graduate Research Assistantships (GRA) are strongly encouraged by the program and efforts will be made to place students in accord with interest and ability in these positions. It is recognized that a substantial number of our students are also employed at the University and elsewhere for this program and have different levels of preparation. These decisions are made on an individual basis between the DGS, Department Chairs, and program faculty.

These changes are also made to reflect current offerings in the Departments of Epidemiology and Biostatistics such that the sequencing of the courses will allow the student to complete the course work requirements, excluding the qualifying exam and residency in a two-year time period.

Please feel free to contact me if you have additional questions regarding the program.

Sincerely,

Steven R. Browning, Ph.D.

Associate Professor, Epidemiology
Director of Graduate Studies for the PhD

Department of Epidemiology

University of Kentucky

Lexington, Kentucky 40536-0003

Phone: (859) 218-2235

E-mail: srbrown@uky.edu

CHANGE DOCTORAL DEGREE PROGRAM FORM

Signature Routing Log

General Information:

Proposal Name: Epidemiology/Biostatistics

Proposal Contact Person Name: Steve Browning Phone: 218-2235 Email: srbrown@email.uky.edu

INSTRUCTIONS:
Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Epidemiology Faculty	11/21/18	Steve Fleming, PhD / 218-2229 / steven.fleming@uky.edu	
Biostatistics Faculty	11/21/18	Heather Bush, PhD / 218-2080 / heather.bush@uky.edu	
Academic Affairs & Assessment Committee	12/10/18	Nancy Johnson / / nejohn2@uky.edu	
Faculty Council	1/22/19	John Watkins / 218-0240 / john.watkins@uky.edu	
Associate Dean for Academic Affairs	1/22/19	Jamie Taylor / 323-7341 / jamie.hunt@uky.edu	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision[3]
Undergraduate Council	N/A		
Graduate Council	Roshan Nikou		
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

[3] Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.