Nikou, Roshan

From: Graduate.Council.Web.Site@www.uky.edu
Sent: Tuesday, December 02, 2008 9:41 PM
To: Nikou, Roshan
Cc: Price, Cleo
Subject: Investigator Report

AnyForm User: www.uky.edu
AnyForm Document: http://www.research.uky.edu/gs/GCInvestigatorReport.html
AnyForm Server: www.uky.edu (/www/htdocs/AnyFormTurbo/AnyForm.php)
Client Address: 75.90.150.105

College/Department/Unit: = BST 761
Category:_ = New
Date_for_Council_Review: = 12/4/08
Recommendation_is:_ = Approve
Investigator: = Bill Smith
E-mail_Address = bsmith@engr.uky.edu
1__Modifications: = None
2__Considerations: = N/A
3__Contacts: =
4__Additional_Information: = This course is part of a biostatistics track created for the proposed PhD in Epidemiology/Biostatistics, College of Public Health

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AnyForm/PHP3 0.1

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APPLICATION FOR NEW COURSE

1. Submitted by the College of Public Health Date: March 10, 2008

   Department/Division proposing course: Biostatistics

2. Proposed designation and Bulletin description of this course:

   a. Prefix and Number BST 761

   b. Title* Time to Event Analysis

   *If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

   c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

   (___) CLINICAL (___) COLLOQIUM (___) DISCUSSION (___) LABORATORY (3) LECTURE

   (___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

   (___) SEMINAR (___) STUDIO (___) OTHER – Please explain:

   d. Please choose a grading system: ☒ Letter (A, B, C, etc.) ☐ Pass/Fail

   e. Number of credit hours: 3

   f. Is this course repeatable? YES ☐ NO ☒ If YES, maximum number of credit hours:

   g. Course description:

   Analysis of time to event data encountered in Public Health and Medicine. Survival distributions and hazard functions. Time to event analysis using Kaplan-Meier method and life-table method. Accelerated failure time model, logit model for discrete data, complimentary log-log model, and proportional hazards model. Tests for goodness-of-fit, graphical methods, and residual and influence statistics. Time-dependent covariates, non-proportional hazards, left truncation, and late entry into the risk set. Sample size and power, competing risks, and time to event analysis with missing data.

   h. Prerequisite(s), if any:

   STA 580 or equivalent

   i. Will this course be offered through Distance Learning? YES ☐ NO ☒

   If YES, please circle one of the methods below that reflects how the majority of the course content will be delivered:

   Internet/Web-based | Interactive video | Extended campus | Kentucky Educational Television (KET/teleweb) | Other

   Please describe "Other":

3. Teaching method: ☒ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

   Prefix and Number Signature of chair of cross-listing department

APPLICATION FOR NEW COURSE

5. Requested effective date (term/year): Fall / 2009

6. Course to be offered (please check all that apply): ☒ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☒ YES ☐ NO

   If NO, please explain: _____

8. Why is this course needed?

   This course is a requirement in the proposed PhD in Epidemiology/Biostatistics.

9. a. By whom will the course be taught? Marta Mendiondo or Brent Shelton

   b. Are facilities for teaching the course now available? ☒ YES ☐ NO

   If NO, what plans have been made for providing them?

10. What yearly enrollment may be reasonably anticipated?

    5-10 students

11. a. Will this course serve students primarily within the department? ☒ Yes ☐ No

    b. Will it be of interest to a significant number of students outside the department? ☒ YES ☐ NO

    If YES, please explain.

    The course will be a requirement for the proposed Ph.D. in Epidemiology/Biostatistics. Some of the students in that program may consider Epidemiology their home department.

    It may be of interest to graduate students from other colleges and to the MPH and Dr.PH students in the College of Public Health.

12. Will the course serve as a University Studies Program course†? ☐ YES ☒ NO

    If YES, under what Area?

    †AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

    ☒ traditional – offered in corresponding departments at universities elsewhere

    ☐ relatively new – now being widely established

    ☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☒ Yes ☐ No

15. Is this course part of a proposed new program? ☒ YES ☐ NO

    If YES, please name: PhD in Epidemiology and Biostatistics

16. Will adding this course change the degree requirements for ANY program on campus ? ☐ YES ☒ NO

    If YES ‡, list below the programs that will require this course:

APPLICATION FOR NEW COURSE

‡In order to change the program(s), a program change form(s) must also be submitted.

17. ☒ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Marta S. Mendiondo Phone: 257-141 ext.274 Email: marta@email.uky.edu

20. Signatures to report approvals:

4-1-08 DATE of Approval by Department Faculty	Richard Kryscio / Richard Kryscio printed name Reported by Department Chair signature
6-26-08 DATE of Approval by College Faculty	Linda Alexander / Linda Alexander printed name Reported by College Dean signature
* DATE of Approval by Undergraduate Council	/ printed name Reported by Undergraduate Council Chair signature
* DATE of Approval by Graduate Council	Brian A Jackson printed name Reported by Graduate Council Chair signature
6/19/08 * DATE of Approval by Health Care Colleges Council (HCCC)	Heidi Anderson / Heidi M Anderson printed name Reported by Health Care Colleges Council Chair signature
* DATE of Approval by Senate Council	Reported by Office of the Senate Council
* DATE of Approval by University Senate	Reported by Office of the Senate Council

*If applicable, as provided by the *University Senate Rules.* (http://www.uky.edu/USC/New/RulesandRegulationsMain.htm)

BST 761: Time to Event Analysis

Course Description: Analysis of time to event data encountered in Public Health and Medicine. Survival distributions and hazard functions. Time to event analysis using Kaplan-Meier method and life-table method. Accelerated failure time model, logit model for discrete data, complimentary log-log model, and proportional hazards model. Tests for goodness-of-fit, graphical methods, and residual and influence statistics. Time-dependent covariates, non-proportional hazards, left truncation, and late entry into the risk set. Sample size and power, competing risks, and time to event analysis with missing data.

Course structure: 3 credit hours (3 hours of lecture and 0 hours of laboratory)

Prerequisite: STA 580 or equivalent

Initial offering: Fall 2009

Instructors: Any faculty member in the Biostatistics Department

Philosophical Statement: Students pursuing applied graduate degrees in Epidemiology and /or Biostatistics in the College of Public Health must be able to analyze time to event data since it is routinely encountered in biomedical research and risk analysis. This is a core course for the PhD in Epidemiology and Biostatistics. This course will also be offered to MPH and DrPH students in the College of Public Health and will be open to graduate students in other colleges. Emphasis is placed on the application of existing methodology. These applications will focus on coherent and succinct written interpretation of results encountered when analyzing data in Public Health. Students will become familiar with the basics of the underlying theory behind this methodology.

Objectives: Students completing BST 761 will be able to:

1. identify and differentiate amongst methods used in analyzing time to event data in Public Health
2. understand the assumptions involved in applying different methods
3. assess assumption's violations
4. conduct time to event analyses of Public Health and medical data using SAS and STATA create analysis reports summarizing relevant results

References:

1. Klein JP and Moeschberger ML. Survival Analysis: Techniques for Censored and Truncated Data Second Edition*. New York: Springer, 2003.
2. Kleinbaum DG and Klein M. Survival Analysis: A Self-Learning Text Second Edition*. New York, NYSpringer, 2005 .
3. Allison PD. Survival Analysis Using the SAS System: A Practical Guide*. Cary, NC: SAS Institute Inc., 1995.
4. Cleves MA, Gould WW, and Gutierrez RG. An Introduction to Survival Analysis Using Stata. College Station, TXStata Press, 2002.

5. Collett D. Modelling Survival Data in Medical Research. Boca Raton, FL: Chapman &Hall/CRC Press, 1994.
6. Hosmer DW and Lemeshow S. Applied Survival Analysis: Regression Modeling of Time to Event Data. New Yrk, NYJohn Wiley &Sons, 1999.
7. .
8. Lee ET. Statistical Models for Survival Data Analysis. New Yrk, NYJohn Wiley &Sons, 1992.
9. Selvin, Steve. Survival Analysis for Epidemiologic and Medical Research (Practical Guides to Biostatistics and Epidemiology). Cambridge University Press, 2008.
10. Shuster JJ. Practical Handbook of Sample Size Guidelines for Clinical Trials. Boca Raton, FL: CRC Press, 1993.

*denotes possible course text

Detailed outline:

I. Introductory concepts
   a. Describing survival distributions
   b. Interpreting the hazard function
   c. Simple hazard functions
   d. Origin of time
   e. Censoring and Truncation
II. Estimating and comparing survival curves
   a. Kaplan-Meier method
   b. Testing for differences in survivor functions
   c. Life table method
   d. Life tables for grouped data
   e. Testing for covariate effects
   f. Log survival and smoothed hazard plots
III. Parametric regression models
   a. Accelerated failure time model
   b. Categorical regressor variables
   c. Hypothesis testing in a parametric model
   d. Goodness of fit tests with likelihood ratio statistics
   e. Graphical methods for evaluating a model fit
   f. Left censoring and interval censoring
   g. Piecewise exponential model
IV. Proportional hazards model
   a. Tied data
   b. Time dependent covariates
   c. Cox model with non-proportional hazards
   d. Interaction with time
   e. Left truncation and late entry into the risk set
   f. Estimating survivor functions
   g. Residuals and influence statistics
V. Competing risks

a. Type specific hazards
b. Estimates and tests without covariates
c. Covariate effects via Cox models
d. Multiple event types

VI. Discrete data
a. Logit model
b. Complimentary log-log model with continuous time processes

VII. Sample size and power
a. Sample size for comparing exponential survival
b. Sample size for log rank test
c. Sample size for comparing piecewise exponential survival

VIII. Survival analysis in presence of missing data

IX Survival and Clustering

Assessment: At least six problem sets will be assigned and graded (30%). There will be two exams: a midterm (30%) and final exam (30%) each with two components: an in class component and a take home component. Students will also give a presentation (10%). Students are expected to know enough SAS (or other statistical software package) to complete the take home portion on their own.

Grading Scale:

Grade	%
A	90-100
B	80-89
C	70-79
E	60-69

LaRoche, Adrea S.

From: Brothers, Sheila C
Sent: Monday, September 22, 2008 8:42 AM
To: LaRoche, Adrea S.
Subject: FW: HCCC Transmittal - Program Change: MS in Athletic Training
Attachments: PhD Epi Bio Final Signatures.pdf; FW: important--EPI 714; FW: regarding the New Program Proposal for the PhD in Epidemiology and Biostatistics

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Curricular Items

Don't let the subject line fool you – this is for a PhD in Epidemiology. ☺
Sheila

Office of the Senate Council
Phone: (859) 257-5872

From: Lindsay, Jim D.
Sent: Friday, September 19, 2008 2:20 PM
To: Nikou, Roshan; Jackson, Brian A
Cc: Brothers, Sheila C; Anderson, Heidi Milia; Flanagan, Rebecca; Alexander, Linda A; Kryscio, Richard
Subject: RE: HCCC Transmittal - Program Change: MS in Athletic Training

September 19th, 2008

T R A N S M I T T A L
TO: Brian Jackson, Roshan Nikou
Graduate Council
FROM: Jim Lindsay
Health Care Colleges Council

At its August 19th 2008 meeting, the Health Care Colleges Council approved the following proposal and is now forwarding it to the Graduate Council to approve:

College of Public Health
New Program: Ph.D. in Epidemiology

Attached are the materials to implement the requested action.

cc: Linda Alexander
Becki Flanagan
Richard Kryscio
Shelia Brothers
Heidi Anderson

Jim Lindsay
Health Care Colleges Council Coordinator
Associate Provost for Faculty Affairs Office
University of Kentucky, 205 Frazee Hall
Lexington, KY 40506-0031 Ph. (859) 323.6638
www.uky.edu/Provost/AcademicCouncil/council.php

APPLICATION FOR NEW COURSE

1. Submitted by the College of Public Health Date: March 10, 2008

   Department/Division proposing course: Biostatistics

2. Proposed designation and Bulletin description of this course:

   a. Prefix and Number BST 761

   b. Title* Time to Event Analysis

   *If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

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   (___) SEMINAR (___) STUDIO (___) OTHER – Please explain:

   d. Please choose a grading system: ☒ Letter (A, B, C, etc.) ☐ Pass/Fail

   e. Number of credit hours: 3

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3. Teaching method: ☒ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ (Prefix and Number) _____ (Signature of chair of cross-listing department)

APPLICATION FOR NEW COURSE

5. Requested effective date (term/year): Fall / 2009

6. Course to be offered (please check all that apply): ☒ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☒ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

This course is a requirement in the proposed PhD in Epidemiology/Biostatistics.

9. **a.** By whom will the course be taught? Marta Mendiondo or Brent Shelton

b. Are facilities for teaching the course now available? ☒ YES ☐ NO

If NO, what plans have been made for providing them?

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5-10 students

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If YES, please name: PhD in Epidemiology and Biostatistics

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APPLICATION FOR NEW COURSE

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Name: Marta S. Mendiondo Phone: 257-141 ext.274 Email: marta@email.uky.edu

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4-1-08	Richard Kryscio / Richard Kryscio	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair signature
6-26-08	Linda Alexander / Linda Alexander	
DATE of Approval by College Faculty	printed name	Reported by College Dean signature
	/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair signature
	/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair signature
9/19/08	Heidi Anderson / Heidi M Anderson	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council
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*If applicable, as provided by the *University Senate Rules. (http://www.uky.edu/USC/New/RulesandRegulationsMain.htm)*

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Prerequisite: STA 580 or equivalent

Initial offering: Fall 2009

Instructors: Any faculty member in the Biostatistics Department

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E	60-69