

Nikou, Roshan

From: Graduate.Council.Web.Site@www.uky.edu
Sent: Tuesday, December 02, 2008 10:00 PM
To: Nikou, Roshan
Cc: Price, Cleo
Subject: Investigator Report

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

College/Department/Unit: = STA 643
Category: = Change
Date_for_Council_Review: = 12/4/08
Recommendation_is: = Approve
Investigator: = Bill Smith
E-mail_Address = bsmith@enr.uky.edu
1__Modifications: = None
2__Considerations: = N/A
3__Contacts: = Kurt Viele, Statistics.
4__Additional_Information: = This course is part of the change requested for the MS in Statistics. Additional theoretical material has been added to this existing course.

--

AnyForm/PHP3 0.1

AnyFormRandomSeqNo: 4822324

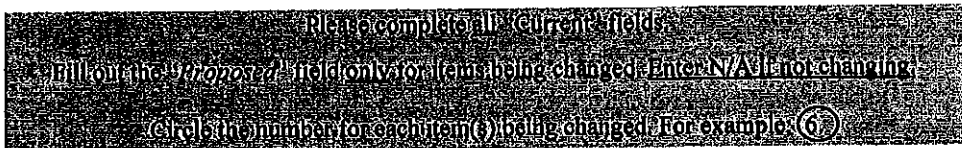
APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

OFFICE OF THE SENATE COUNCIL

1. Submitted by the College of Arts and Sciences Date: 9/3/2008
Department/Division offering course: Statistics

2. What type of change is being proposed? [X] Major [] Minor
*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.
If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES



3. Current prefix & number: STA 643 Proposed prefix & number:

4. Current Title: Advanced Experimental Design
Proposed Title:
If title is longer than 24 characters, offer a sensible title of 24 characters or less:

5. Current number of credit hours: 3 Proposed number of credit hours:

6. Currently, is this course repeatable? YES [] NO [X] If YES, current maximum credit hours:
Proposed to be repeatable? YES [] NO [] If YES, proposed maximum credit hours:

7. Current grading system: [X] Letter (A, B, C, etc.) [] Pass/Fail
Proposed grading system: [] Letter (A, B, C, etc.) [] Pass/Fail

8. Courses must be described by at least one of the categories below. Include number of actual contact hours per week for each category.
Current:
() CLINICAL () COLLOQUIUM () DISCUSSION () LABORATORY (3) LECTURE
() INDEPEND. STUDY () PRACTICUM () RECITATION () RESEARCH () RESIDENCY
() SEMINAR () STUDIO () OTHER - Please explain:

Proposed:
() CLINICAL () COLLOQUIUM () DISCUSSION () LABORATORY () LECTURE
() INDEPEND. STUDY () PRACTICUM () RECITATION () RESEARCH () RESIDENCY
() SEMINAR () STUDIO () OTHER - Please explain:

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

10. Supplementary teaching component: [X] N/A [] Community-Based Experience [] Service Learning [] Both
Proposed supplementary teaching component: [] Community-Based Experience [] Service Learning [] Both

11. Cross-listing: [X] N/A or /

APPLICATION FOR CHANGE IN EXISTING COURSE; MAJOR and MINOR

Current Prefix & Number printed name Current Cross-listing Department Chair signature

a. Proposed – REMOVE current cross-listing: _____ / _____
printed name Current Cross-listing Department Chair signature

b. Proposed – ADD cross-listing: _____ / _____
Prefix & Number printed name Proposed Cross-listing Department Chair signature

12. Current Distance Learning (DL) status: Already approved for DL Please Add Please Drop
If PROPOSING, check one of the methods below that reflects how the majority of the course content will be delivered.
 Internet/Web-based Interactive Video Extended Campus

13. Current prerequisites:
 STA 603

Proposed prerequisites:

14. Current Bulletin description:
 Advanced topics in analyses of incomplete block designs; confounding and change-over designs; data collected at several places and times; principles of design construction.

Proposed Bulletin description:
 Linear Model interpretation in vector spaces and projections, use of generalized inverses, identifiability and estimability of contrasts, normal equations, Gauss-Markov Theorem, MVUE, distribution theory for quadratic forms, complex designs such as crossover, split-plot and repeated measures, asymptotics for general linear models, familiarity with nonparametric regression models.

15. What has prompted this change?
 To accommodate a more applied focus in the M.S. program in statistics, the applied sequence STA503/STA603/STA643 is being reworked to accommodate recent advances in statistical methodology. The theoretical content is also being slightly reduced in STA603, with the more theoretical element of the current STA603 placed in the revised STA643.

16. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:
 See question 15

17. Please list any other department that could be affected by the proposed change:
 None

18. Will changing this course change the degree requirements for ANY program on campus? YES NO
 If YES[‡], list below the programs that require this course:

[‡] In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

19. Is this course currently included in the University Studies Program? Yes No

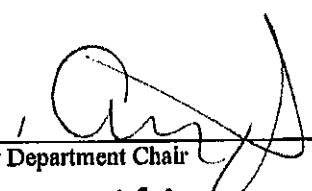
20. Check box if changed to 400G or 500. If changed to 400G- or 500-level, you must include a syllabus showing differentiation for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course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

21. Within the department, who should be contacted for further information on the proposed course change?

Name: Kert Viele Phone: 257-4803 Email: viele@uky.edu

22. Signatures to report approvals:

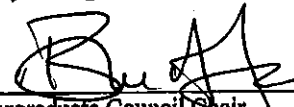
2/6/2008
DATE of Approval by
Department Faculty

Arnold J. Stromberg
printed name Reported by Department Chair  signature

11/7/08
DATE of Approval by College
Faculty

Leonidas G. Bachas
printed name Reported by College Dean  signature

6/10/08
*DATE of Approval by
Undergraduate Council

Blair McLean
printed name Reported by Undergraduate Council Chair  signature

*DATE of Approval by Graduate
Council

/
printed name Reported by Graduate Council Chair signature

*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

*DATE of Approval by the
University Senate

/
Reported by the Office of the Senate Council

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

Excerpt from *University Senate Rules*:

SR 3.3.0.G.2: Definition. A request may be considered a minor change if it meets one of the following criteria:

- a. change in number within the same hundred series;
- b. editorial change in the course title or description which does not imply change in content or emphasis;
- c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
- d. a cross-listing of a course under conditions set forth in SR 3.3.0.E;
- e. correction of typographical errors.

STA643

Advanced Experimental Design

Learning Objectives

Instructor : To be taught by any member of the graduate faculty in Statistics

Overview : Course contains the theoretical underpinnings of the methods discussed in STA602 and STA603, making heavy use of matrix algebra. Course also discusses some more advanced designs, such as split-plot and repeated measures designs.

Format : 3 hours lecture,

Prerequisite : STA603

Learning objectives :

- 1) Understanding of linear model interpretation in vector spaces and projections, and the use of generalized inverses;
- 2) Understanding identifiability and estimability of contrasts;
- 3) Familiarity with main theoretical results regarding normal equations, Gauss-Markov, MVUE, MLE, distribution theory;
- 4) Ability to independently derive distributional results for new situations;
- 5) Familiarity with complex designs such as crossover, split-plot, and repeated measures;
- 6) Asymptotics for general linear models;
- 7) Familiarity with nonlinear regression models.

Grading : Students will be graded on a mix of homework, exams, and projects at the discretion of the instructor. A standard grading scale of (≥ 90 at least an A, ≥ 80 at least a B, ≥ 70 at least a C, ≥ 60 at least an E) should be used.