From:	Graduate.Council.Web.Site@www.uky.edu
Sent:	Tuesday, December 02, 2008 7:02 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
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Client Address: 128.163.161.136

College/Department/Unit: = STA 601
Category:_   = Change
Date_for_Council_Review: = 12/4/08
Recommendation_is:_ = Approve
Investigator: = T. Troland
E-mail_Address = troland@pa.uky.edu
1__Modifications: = None, routine investigation
2__Considerations: = I assume for item 8 that the contact hours in the proposed course will be the same as in the current course.
3__Contacts: = I discussed course changes with Kert Viele, no problems were identified.
4__Additional_Information: =

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APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

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?   ☒ 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

Please complete all "Current" fields.
Fill out the "Proposed" field only for item(s) being changed. Enter N/A if not changing.
Circle the number for each item(s) being changed. For example: ⑥

3. Current prefix & number: **STA 601**   Proposed prefix & number: *STA 607*

4. Current Title   Theory of Statistical Inference II

   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 ☒   If YES, current maximum credit hours: _____

   Proposed to be repeatable?   YES ☐   NO ☐   *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☒ Letter (A, B, C, etc.)   ☐ Pass/Fail

   Proposed grading system: ☐ *Letter (A, B, C, etc.)*   ☐ *Pass/Fail*

8. Courses must be described by <u>at least one</u> of the categories below. Include number of <u>actual contact hours per week</u> 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: ☒ N/A   ☐ Community-Based Experience   ☐ Service Learning   ☐ Both

   Proposed supplementary teaching component: ☐ *Community-Based Experience*   ☐ *Service Learning*   ☐ *Both*

11. Cross-listing: ☒ 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 532

Proposed prerequisites:

STA 606

14. Current Bulletin description:
Elements of decision theory; properties of estimators; point and interval estimation; hypothesis-testing; sequential testing; inference from categorical data; linear regression as conditional expectation; multivariate normal distribution

Proposed Bulletin description:
Minimal sufficiency and completeness, Lehmann-Scheffe Theorem and basic decision theory, methods for evaluating interval estimators. Methods for evaluating hypothesis testing procedures, robustness and M-estimation, sequential analysis, censored data, model selection techniques.

15. What has prompted this change?
To accommodate a more applied focus in the M.S. program in statistics, the theory sequence STA531/STA532/STA601 is being reworked. STA601 contains advanced inference topics in this revision.
Course number change is intended to keep this in sequence with the renumbering of STA532 to STA606. Finally, current STA532 is being renumbered to STA606

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	__...undas G. Bachas__ printed name　　Reported by College Dean　　signature
_____ *DATE of Approval by Undergraduate Council	printed name　Reported by Undergraduate Council Chair　signature
__12/12/08__ *DATE of Approval by Graduate Council	Brian Jackson 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*)

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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.

STA601 (to be renumbered STA607)

Theory of Statistical Inference II

Learning Objectives

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

Overview : Course involves some of the more theoretical aspects of point estimation, interval estimation, and hypothesis testing, taught at the level of Casella and Berger, Statistical Inference. Specifically, the course spends time on the theoretical proofs of optimality in these settings. The course ends with a series of introductions to advanced inference topics (Robustness, sequential methods, censored data, and model selection).

Format : 3 hours lecture

Prerequisite : STA606 (Theory of Statistical Inference I)

Learning objectives :

1) More discussion of the sufficiency principle (1 week) – completeness and its relation to minimal sufficiency.
2) Methods of Evaluating Point Estimators (1.5 weeks) – Lehmann-Scheffe theorem, decision theory
3) Methods for evaluating tests (2 weeks)
4) Methods for evaluating interval estimators (1.5 weeks)
5) Robustness and M-Estimation (2 weeks)
6) Sequential Analysis (2 weeks)
7) Censored Data (2 weeks)
8) Model Selection (3 weeks) – AIC, BIC, Cross Validation, GCV.

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, >=0 at least an E) should be used.