

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 items 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 503 Proposed prefix & number: STA 602

4. Current Title Introduction to Statistical Methods
 Proposed Title[†] _____
[†]If title is longer than 24 characters, offer a sensible title of 24 characters or less: _____

5. Current number of credit hours: 4 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 at least one of the categories below. Include number of actual contact hours per week for each category.

Current:

() CLINICAL () COLLOQUIUM () DISCUSSION (2) 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 _____ / _____

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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:
Graduate Standing in Statistics

Proposed prerequisites:

14. Current Bulletin description:
 Summary statistics, graphical methods, point and interval estimation, hypothesis testing, experimental design, simple and multiple regression, covariance and ANOVA as a special case of regression, categorical data analysis

Proposed Bulletin description:
 Sampling distributions, statistical models, point estimates and confidence intervals, significance testing. Experimental Design (randomized blocks, nested/hierarchical models, Latin Squares), ANOVA (one, two, and multiway factorials, fixed and random effects), multiple comparison procedures, rank-based analyses, linear and nonlinear regression, power and sample size calculations, professional presentation of results.

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. We are also including recent advances in statistical methodology
In addition, course is intended solely for graduate students, hence the number change

16. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:
course is still an overview of (many) basic statistical methods.

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.

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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:

<u>2/6/2008</u> DATE of Approval by Department Faculty	<u>Arnold J. Stromberg</u> printed name	Reported by Department Chair  signature
<u>11/7/08</u> DATE of Approval by College Faculty	<u>Leonidas G. Bachas</u> printed name	Reported by College Dean  signature
<u>1-20-2009</u> *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
*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.

STA503 (to be renumbered STA602)

Introduction to Statistical Methods

Learning Objectives

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

Overview : Course is a first graduate course in statistical methods for students seeking a graduate degree in statistics, discussing basic statistical methods, experimental design, and ANOVA.

Implementation of the methods on the computer and professional presentation of results is essential to the course.

Format : 3 hours lecture, 2 hours lab.

Prerequisite : Graduate Standing in Statistics

Learning objectives :

- 1) Sampling distributions, formal statistical models, significance testing and point and interval estimation, and basics of sampling;
- 2) Experimental design: Completely randomized, randomized blocks, nested/hierarchical, Latin squares;
- 3) Analysis of variance: One-, two-, and multi-way factorials, fixed and random effects models, ANOVA tables, multiple comparison procedures, model selection and diagnostics; Rank-based analysis;
- 4) Simple linear regression: Modes of parametric inference, diagnostics and corrective procedures, applied nonparametric regression
- 5) Capability to analyze real data using appropriate basic parametric and nonparametric statistical methods for means, variances, proportions, rates, and survival;
- 6) Understanding issues of power and sample size;
- 7) Ability to report and present the results in a professional manner;
- 8) Ability to use the software packages R and SAS, for appropriate data analysis, and Latex and Powerpoint for presentation (software training is not part of this course, students learn the basics in other concurrent classes).

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.

