Texas A&M University

Departmental Request for a Change in Course
Undergraduate + Graduate + Professional

1. This request is submitted by the Department of STATISTICS

2. Course prefix, number and complete title of course: STAT 620 - Statistical Large Sample Theory

Attach a brief supporting statement for changes made to items 3a thru 3d, and 5 below.

3. Change requested
   a) Prerequisite(s): From ____________________________ To ____________________________
   b) Withdrawal (reason) ____________________________
   c) Cross-list with ____________________________

   Cross-listed courses require the signature of both department heads.
   d) Change in course title and description. Enter complete current course title and current course description;
   complete proposed course title and proposed course description in items 4 and 5.
   e) Change in credit/contact hours. Complete item 6b. Underscore change(s). Attach a course syllabus.

4. Complete current course title and current course description: Statistical Large Sample Theory:

   Transformations of statistics; statistical functionals including influence curves and M, L, and R estimators;
   U-statistics; asymptotic properties of estimators; asymptotic properties of tests; order of stochastic convergence;
   Edgeworth expansions; and the bootstrap.

5. Complete proposed course title and proposed course description (not to exceed 50 words): Asymptotic Statistics:

   Review of basic concepts and important convergence theorems; elements of decision theory; delta method; Bahadur representation theorem;
   asymptotic distribution of MLE and the LRT statistics; asymptotic efficiency; limit theory for U- statistics and differential statistical functionals with illustrations from M-, L-, R- estimation; multiple testing.

6. a) As currently in course inventory:

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   b) Change to:

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Approval recommended by:

Michael J. Sheriden 2-19-2009

Head of Department Date

Chair, College Review Committee Date

Dean of College Date

Submitted to Coordinating Board by:

Director of Academic Support Services Date

Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8836.
OAR/AS – 04/07

1 of 4 B17
TEXAS A&M UNIVERSITY  
Department of Statistics  
MS 3143   TAMU  
COLLEGE STATION, TEXAS 77843-3143

Michael T. Longnecker  
Professor and Associate Department Head  
Phone: (979) 845-3141 Fax: (979) 845-3144  
Email: longneck@stat.tamu.edu

February 12, 2009

MEMORANDUM

TO: University Curriculum Committee

FROM: Michael Longnecker  
Associate Department Head, Statistics

SUBJECT: Change in Statistics Courses

The Department of Statistics has recently conducted an in-depth analysis of its Ph.D. program. The result of this analysis was a revision of several courses and the development of new courses to reflect new areas of research in statistics. The follow courses required changes in the topics covered in the course and/or changes in the course prerequisites: STAT 604, STAT 605, STAT 612, STAT 613, STAT 614, STAT 620, STAT 621, and STAT 632.
Statistical Large Sample Theory

STAT 620, FALL 2008

- **Latex Template Review/614**
- **CLASS ROOMS + HOURS:** TR 2:20-3:35pm, BLOC 163
- **INSTRUCTOR:** S.N. Lahiri, 525J Blocker; 979-862-7582; snlahiri(at)stat.tamu.edu
- **OFFICE HOURS:** TR 3:40-4:40pm and by appointments.
- **TEXT BOOKS:** The text for this course is
  However, material will be drawn on also from other books, research monographs and journal articles.

- **COURSE DESCRIPTION:** This course will cover the following topics:
  1. Review of basic concepts and convergence theorems from STAT 614
  2. Elements of Decision Theory
  3. Sample quantiles and Bahadur representation theorem
  4. Statistical functionals including influence curves and M, L, and R estimators
  5. U-statistics;
  6. Asymptotic properties of Maximum likelihood estimators;
  7. Asymptotic properties of tests;
  8. Multiple Testing;

- **COURSE GRADE:** our grade for this course will be determined based on your performance
  on homework assignments (10%), the midterm exams (40%), and the final exam (50%).

**IMPORTANT DATES** for the HWs, the Midterm and the Final exam
- Homework 1: Tu 1/27 (Due 2/10)
- Homework 2: Tu 2/10 (Due 2/24)
- Homework 3: Tu 2/24 (Due 3/10)
- Homework 4: T 3/10 (Due 4/07)
- Midterm Exam Wed 3/25 (5:45-7:45pm)
- Homework 5: Tu 4/07 (Due 4/21)
- Homework 6: Tu 4/21 (Due 5/05)
- Final Exam Wed, May 13, 1-3pm; > See the University Final Exam schedule

*snlahiri@stat.tamu.edu*
*January 20, 2009.*
• ADA Statement:

STATEMENT ON DISABILITIES: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Disabilities Services in Room B118, Cain Hall. The phone number is 845-1637.

• Plagiarism Statement:

STATEMENT ON PLAGIARISM: The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission. As commonly defined, plagiarism consists of passing off as one's own ideas, words, writing, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section "Scholastic Dishonesty."

• Academic Integrity Statement:

"An Aggie does not lie, cheat, or steal or tolerate those who do."

All syllabi shall contain the above Aggie Honor Code and refer students to the Honor Council Rules and Procedures at the web site: www.tamu.edu/aggiehonor. If you encounter students cheating or not abiding by university rules then it is mandatory that you report the student to the Aggie Honor System Office: complete information at http://www.tamu.edu/aggiehonor.