Texas A&M University
Departmental Request for a New Course
Undergraduate • Graduate • Professional
• Submit original form and attach a course syllabus.

1. This request is submitted by the Department of STATISTICS

2. Course prefix, number and complete title of course: STAT 648 - Applied Statistics and Data Analysis

3. Course description (not more than 50 words): Background to conduct research in the development of new methodology in applied statistics. Topics covered will include: exploratory data analysis; sampling; testing; smoothing; classification; time series; and spatial data analysis.

4. Prerequisite(s) Approval of Instructor Cross-listed with None

5. Is this a variable credit course? □ Yes ☑ No If yes, from _____ to _______.

6. Is this a repeatable course? □ Yes ☑ No If yes, this course may be taken _______ times. Will the course be repeated within the same semester/term? □ Yes ☑ No

7. Has this course been taught as a 289/489/689? ○ Yes ☑ No If yes, how many times? ____ Indicate the number of students enrolled for each academic period it was taught. Fall 2008 - 7 students

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
      Ph.D. in Statistics
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)

9. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

10. Prefix Course # Title (excluding punctuation)
    STAT 648  Applied Statistics and Data Analysis

    Lect. Lab SCH Subject Matter Code 0300032705010001 Admin. Unit 10 11 FICE Code 003632 Level

Approval recommended by:

Michael Jorgensen 2/12/09
Head of Department Date

Chair, College Review Committee Date

Head of Department (if cross-listed course) Date

Dean of College Date

Submitted to Coordinating Board by:

Date

Dean of College Date

Date

Director of Academic Support Services

Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8836.
OAR/AS - 04/07
Texas A&M University
Departmental Request for a New Course
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1. This request is submitted by the Department of **STATISTICS**

2. Course prefix, number and complete title of course: **STAT 648 - Applied Statistics and Data Analysis**

3. Course description (not more than 50 words): **Course will provide students with the necessary background to conduct research in the development of new methodology in applied statistics. Topics covered will include: exploratory data analysis; sampling; testing; smoothing; classification; time series; and spatial data analysis.**

4. Prerequisite(s) **Approval of Instructor**

   Cross-listed with: **None**

   Cross-listed courses require the signature of both department heads.

5. Is this a variable credit course?  ☐ Yes  ☑ No

   If yes, from ________ to ________.

6. Is this a repeatable course?  ☐ Yes  ☑ No

   If yes, this course may be taken ________ times. Will the course be repeated within the same semester/term?  ☐ Yes  ☑ No

7. Has this course been taught as a 289/489/689?  ☑ Yes  ☐ No

   If yes, how many times?  1

   Indicate the number of students enrolled for each academic period it was taught: **Fall 2008 - 7 students**

8. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
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10. **Prefix** | **Course #** | **Title (excluding punctuation)** | **FICE Code** | **Admin. Unit** | **Acad. Year**
     ---- | ---- | ---- | ---- | ---- | ----
     STAT | 648 | APPLIED STATISTICS | 0 0 3 6 3 2 | 1 | 8

   **Lect.** | **Lab.** | **SCH.** | **Subject Matter** | **Content Code**
   ---- | ---- | ---- | ---- | ----
     0 | 3 | 0 | 0 | 0

   **Approval recommended by:**

   **Head of Department**  2/12/09

   **Chair, College Review Committee**  2/16/09

   **Dean of College**

   **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
STATISTICS 648 - Applied Statistics and Data Analysis - FALL 2009

- **Time and Place:** TR 9:35 a.m. - 10:50 a.m., BLOCKER 411
- **Instructor:** Dr. Michael Sherman
- **Office:** 502C Blocker Building
- **Phone:** 845-2992 (Office)
- **Email:** sherman@stat.tamu.edu
- **Office Hours:** TBA
- **Text:** *Introduction to the Bootstrap*, by Efron & Tibshirani

- **Course Outline:**
  A. **Introduction:** examples of complex data sets
  B. **Exploratory data analysis:** numerical measures and data visualization
  C. **Sampling:** random sampling, randomization
  D. **Distributions:** discrete and continuous distributions
  E. **Hypotheses testing:** permutation tests, one- and two- sample testing, AOV
  F. **Regression:** model building and diagnostics
  G. **Multivariate analysis:** smoothing, classification, time series, spatial data

- **Grade Determination:** There will be several class assignments, one midterm exam, and a final exam. The grade will be determined by 30% Assignments, 30% Mid-term Exam, and 40% Presentation.

  - The following letter grades and percentages will be applied:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100-90.0%</td>
</tr>
<tr>
<td>B</td>
<td>89.9-80.0%</td>
</tr>
<tr>
<td>C</td>
<td>79.9-70.0%</td>
</tr>
<tr>
<td>D</td>
<td>69.9-60.0%</td>
</tr>
<tr>
<td>F</td>
<td>59.9-0%</td>
</tr>
</tbody>
</table>
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 Support Services for Students with Disabilities in Room 126 of the Koldus Student Services Building. The phone number is 845-1637.

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."