Florida Atlantic University
Graduate Programs—COURSE CHANGE REQUEST

**Department Name:** Mathematical Sciences  
**College Of:** Charles E. Schmidt College Of Science

**Course Prefix & Number:** STA 6197  
**Current Course Title:** Biostatistics 2

**Change(s) Requested**

- **Show “X” in front of option**
  - Change credits from __________ to: __________
  - Change grading from __________ to: __________
  - Change prerequisites to: STA 4234 Applied Statistics 1 (Minimum Grade C)
  - Change minimum grade to: __________
  - Change corequisites to: __________
  - Change other registration controls to: __________
  - Other __________

**Changes to be Effective (Term):**

Attach syllabus for ANY changes to current course information.

Will the requested change(s) cause this course to overlap any other FAU course(s)? If yes, please list course(s).

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
</table>

**Terminate Course, Effective (Give Last Term Course Is To Be Active):**

Faculty Contact, Email, Complete Phone Number:
Lianfen Qian, lqian@fau.edu, (561) 297-2486

**Signatures**

<table>
<thead>
<tr>
<th>Approved by:</th>
<th>Date:</th>
<th>Supporting Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair: __________________________</td>
<td>__________</td>
<td>Syllabus—must include all criteria as detailed in UGPC Guidelines. Go to: <a href="http://graduate.fau.edu/gpc/">http://graduate.fau.edu/gpc/</a> to access Guidelines and to download this form.</td>
</tr>
<tr>
<td>College Curriculum Chair: ____________________</td>
<td>__________</td>
<td>Written Consent—required from all departments affected.</td>
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<td>College Dean: ______________________________</td>
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<td>UGPC Chair: __________________________________</td>
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<td>Dean of the Graduate College: __________________</td>
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Email this form and syllabus to diamond@fau.edu and eqirjo@fau.edu one week before the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

FAUchangeGrad—Revised January 2010
Course Syllabus for Biostatistics - Longitudinal Data Analysis

1. **Course title/number, number of credit hours**
   Biostatistics - Longitudinal Data Analysis, STA 6197, 3 credit hours

2. **Course prerequisites**
   a. STA 4234 Applied Statistics 1 (Minimum Grade C)

3. **Course logistics**
   a. Term –Spring 2011
   b. Notation if online course – N/A
   c. Class location and time (if classroom-based course) – To be determined

4. **Instructor contact information**
   a. Instructor’s name – Lianfen Qian
   b. Office address – Science & Engineering Bldg, SE43, Room 244
   c. Office hours – To be determined
   d. Contact telephone number – office (561) 297-2486, fax (561) 297-2436
   e. E-mail address – lqian@fau.edu

5. **TA contact information (if applicable)**
   N/A

6. **Course description**
   Course covers techniques for analyzing longitudinal or repeated measured data, including derivation and estimation of model parameters. Also covers univariate and multivariate analysis of variance for repeated measures, random or mixed-effect models, covariate pattern models, generalized estimating equations models, mixed-effect logistic regression models and missing data in longitudinal studies.

7. **Course objectives/student learning outcomes**
   The course will cover the underlying statistical theory of models for longitudinal data analysis, including derivation and estimation of model parameters. In this course, students will learn about statistical techniques for analyzing longitudinal and repeated measures data. The course will focus primarily on application of the various statistical models covered, with direct application illustrated using standard statistical software. Thus, students who complete the course will learn how to analyze longitudinal data and interpret the results from such analysis.

8. **Course evaluation method**
   There will be graded homework assignments accounting for 30% of the student's cumulative performance, a midterm exam, accounting for 30% of the student's cumulative performance, and a final exam (or project) that accounts for 40% of the cumulative performance. The overall grade in the course is derived from the cumulative performance according to the following table.

9. **Course grading scale (optional)**
<table>
<thead>
<tr>
<th>Cumulative Performance</th>
<th>Grade</th>
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<tbody>
<tr>
<td>&gt;94%</td>
<td>A</td>
</tr>
<tr>
<td>&gt;90% - 94%</td>
<td>A-</td>
</tr>
<tr>
<td>&gt;87% - 90%</td>
<td>B+</td>
</tr>
<tr>
<td>&gt;83% - 87%</td>
<td>B</td>
</tr>
<tr>
<td>&gt;80% - 83%</td>
<td>B-</td>
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</tbody>
</table>
10. Policy on makeup tests, late work, and incompletes
If a student cannot attend an exam or hand in a homework project on time due to circumstances beyond their control then the instructor may assign appropriate make-up work. Students will not be penalized for absences due to participation in University-approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. These students will be allowed to make up missed work without any reduction in the student’s final course grade. Reasonable accommodation will also be made for students participating in a religious observance. Also, note that grades of Incomplete (“I”) are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances. A grade of “I” will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU’s University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing with supporting documentation, where appropriate.

11. Special course requirements (if applicable)
N/A

12. Classroom etiquette policy (if applicable)
University policy on the use of electronic devices states: “In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions.”

13. Disability policy statement
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) -- in Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures.

14. Honor Code policy statement
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at http://www.fau.edu/regulations/chapter4/4.001_Honor_Code.pdf.

15. Required texts/readings
16. Supplementary/recommended readings


17. Course topical outline

Lecture Schedule
- Longitudinal Data and Repeated Measurements (ca. 2 weeks)
- Univariate and Multivariate Analysis of Variance (ca. 2 weeks)
- Random or Mixed-effects Models (ca. 2.5 weeks)
- Covariance Pattern Models (ca. 2.5 weeks)
- Generalized Estimation Equations (GEE) Models (ca. 2.5 weeks)
- Mixed-effects Logistic Regression Models (ca. 2.5 weeks)
- Missing Data in Longitudinal Studies (ca. 2 weeks)