MATH 4350A – Biostatistics II  
TTH 2:10 – 3:25  

Instructor: Jack Follis  
Office: MATH 113  
Telephone: 713-942-5046  
Email: follisj@stthom.edu  
Office Hours: MW 11am – 2:30pm  

TTH 10-11am  


**Course Catalog Description:** Application and extension of Biostatistics I with a focus on advanced statistical concepts which recur in biomedical research literature; multiple regression, logistic regression and survival analysis. Other topics may include time series analysis and clinical trials. Practical experience with the widely used statistical research software package R. Emphasis on realistic data typically encountered in applications of biostatistics.  

**Prerequisites:** MATH 3450.  

**COURSE OBJECTIVES:** Upon completion of this course, students will be able to:  

- Differentiate between linear, logistic and proportional hazards models  
- Identify and control for confounders  
- Construct multivariable regression models  
- Interpret regression coefficients for different types of models  
- Use R for statistical analyses  

Course Outline:  
The outline below is tentative; it may change in the event of circumstances beyond the instructor’s control.  

1. Introduction to R  
2. Linear regression  
3. Logistic Regression  
4. Survival Analysis  
5. Special Topics  

Grade in Course:  
Projects (3) 75%  
Final 25%
**GRADING SCALE:** In this class the final course grades will be determined using the following grade scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Letter Grade</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>93.0 - 100</td>
<td>A</td>
</tr>
<tr>
<td>A-</td>
<td>90.0 - 92.9</td>
<td>A-</td>
</tr>
<tr>
<td>B+</td>
<td>87.0 - 89.9</td>
<td>B+</td>
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<tr>
<td>B</td>
<td>83.0 - 86.9</td>
<td>B</td>
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<tr>
<td>B-</td>
<td>80.0 - 82.9</td>
<td>B-</td>
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<tr>
<td>C+</td>
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**Policy on Academic Dishonesty**

(Taken from the 2010-2011 Undergraduate Catalog)

Every offense against academic honesty seriously undermines the teaching-learning process for which the University exists, and such offenses will be dealt with expeditiously according to the following criteria.

**Definition**

Academic dishonesty includes but is not limited to:

1. Cheating on an examination or test; for example, by copying from another’s paper or using unauthorized materials before or during the test;
2. Plagiarism, which represents as one’s own the work of another, whether published, without acknowledging the precise source;
3. Knowing participation in the academic dishonesty of another student, even though one’s own work is not directly affected;
4. Any conduct which reasonable people in similar circumstances would recognize as dishonest in an academic setting.

**Penalty**

The penalty for an incident of academic dishonesty is, at the discretion of the faculty member, either a mark of zero for the work in question or a grade of F for the course.

**Disabilities**

Any student with a disability requiring accommodations in this course is encouraged to contact me after class or during office hours. Additionally, students will need to contact Counseling and Disability Services in Crooker Center.

This office can be reached at (713) 525-2169 or 6953

**DROPPING THE COURSE:** If you decide you do not wish to continue the course, it is your responsibility to go through the proper channels and officially drop the course.

**Tutorial Services**

Students needing extra assistance with course concepts may also visit the Tutorial Services Center and/or ust.askonline.net.