# STA 4504/5503 Analysis of Categorical Data - Spring 2015

Section 7516/7519: MWF 2 (08:30 - 09:20) in TUR 2319

#### Instructor:

Demetris Athienitis (athienit(5)ufl.edu)

Office: Griffin Floyd 116B Phone:352-273-2972

Office Hours: Office Hours subject to change and will be posted on the course website

Teaching Assistant: TBA

Course Web Address: Canvas

**E-mail etiquette:** Please put "4504" or "5503" at the start of the subject line. Failure to do so will mean that your email will not filtered and hence not answered.

#### **Course Description:**

This course requires as a prerequisite a grasp of basic statistical methods including linear models such as regression and ANOVA. Course content includes description and inference for binomial and multinomial observations using proportions and odds ratios; multi-way contingency tables; generalized linear models for discrete data; logistic regression for binary responses; multi-category logit models for nominal and ordinal responses; inference for matched-pairs and correlated clustered data; loglinear models.

The student is expected to learn when these methods may be applied, how to apply them, and how to properly interpret the results.

#### **Course Materials Required:**

An Introduction to Categorical Data Analysis, (2<sup>nd</sup> edition), by A. Agresti (Wiley, 2007). We will be covering the first 10 chapters of the book.

**Software:** Examples will given and analyzed in R. Links will be posted on the class website. Analysis of datasets and examples in the book can be found at <a href="http://statistics.unl.edU/facultv/bilder/stat875/r.htm">http://statistics.unl.edU/facultv/bilder/stat875/r.htm</a>. For more information on software please see instructor's website <a href="http://www.stat.ufl.edu/~athienit">http://www.stat.ufl.edu/~athienit</a>.

Homework/Quizzes: Homework will be assigned (approximately) each week which will be posted on the class website. Sometimes based on the homework, quizzes will be administered. The Teaching Assistant will be responsible for the grading of the homework. It is acceptable for students to work together as long as the work handed in is uniquely yours. You are encouraged to address the TA if you have any difficulties.

Some homework require the use of statistical software and your solutions must show the use of software for exercises that require it by attaching relevant computer output.

**Exams:** There will be three exams on the following dates:

Exam 1: February 6<sup>th</sup> in class
 Exam 2: March 13<sup>th</sup> in class
 Exam 3: April 30<sup>th</sup> in class (08:00)

If you are unable to take an exam at the scheduled time, you must notify the instructor as early as possible. If an emergency situation precludes an advance arrangement, you should let the instructor know within 24 hours of the missed exam. Each case will be reviewed individually. You will be required to provide official documentation to be eligible for make-up examination.

You are responsible for submitting your work in a <u>timely ΠΠΟΠΠΕΓ</u>. Late submissions will not be accepted. You must <u>Show youl' Wol'k</u> the steps and methodology taken, to obtain your answer/conclusion.

**Grades:** For Exams 1, 2 and 3, the best two account for 27.5% of the final grade and the worst of the three for 20%. The homework accounts for 25% and the lowest one will be dropped.

## **Grading Scale:**

The grading scale will be as follows:

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A:
      91-100%,
                 A-:
                         87- <91%,
                         80- <84%,
      84- <87%.
                  B:
                                    B-:
                                           77- <80%.
                                    C-:
C+:
     74- <77%,
                 C:
                        70- <74%,
                                           67- < 70%,
D+:
      64- <67%.
                D:
                         56- <64%,
E:
      < 55%.
```

To see the effect of the + and - grades on your GPA, look at the following link: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.asox

### Course Policies:

**Academic Dishonesty:** I adhere to the University of Florida rules and guidelines for handling instances of academic dishonesty. Please refer to the Office of Students Services for detailed information about the current policies.

**Instructor's Honor Code:** We the members of the University of Florida community pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

**Grading:** Grades will be changed only when an error has been made by the instructor.

**Incomplete:** Incomplètes are only assigned when extraordinary circumstances, arising after the date for dropping off the course, prevent the student from completing the course requirements. The student must be currently passing the course and discuss the circumstances with the instructor before the final exam takes place. Having a failing grade in the course is not a valid reason for requesting an incomplete.

**Getting Help:** Students may ask questions during the lectures (preferred) or the office hours. The TAs will answer questions during office hours. A list of private tutors (if needed) may be obtained from the Statistics Department Secretary in Griffin Floyd 103.

**Students with disabilities:** Students requesting classroom accommodation must first register with the Dean of Students office at the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/), by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

**Privacy Policies:** Student records are confidential. Only information designated "UF directory information" may be released without your written consent. UF views each student as the primary contact for all communication.

The instructor reserves the right to update any parts of this syllabus as necessary. Students will be notified of any changes.