



STA 4504/5503

Fall 2016 (section 1836/1837)

Categorical Data Analysis

T 4th period 10:40-11:30, R 4-5th period 10:40-12:35 FLO 100

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Course Website: e-Learning

Course Communication:

- Piazza Q&A discussion forum. (Link available “Pages” under Canvas.)
- Office hours (posted on e-learning under “Pages”).
- E-mail for questions regarding course policies. (Ensure that **4504** or **5503** is in the subject line. Failure to do so may result in a non-response.)

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussion and chats. Please refer to expected class netiquette.

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

Required Text(s): *An Introduction to Categorical Data Analysis*, 2nd Edition

Author(s): A. Agresti **ISBN-13:** 9780471226185

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.

Prerequisite(s): STA 3024 or STA 3032 or STA 4210 or STA 4322

Credit Hours: 3

Software: You will need a computer for the homework assignments and practise. There will not be any lessons on how to use software, but questions are welcomed especially during office hours. The main software used in class will be R <http://www.r-project.org/> although you can use any other software you wish that yield similar results. For more help information including R tutorials, visit <http://www.stat.ufi.edu/~athienit/software.html>

Purpose of Course: The student is expected to learn when the methods mentioned in the course description may be applied, how to apply them, and how to properly interpret the results.

Course Goals and Objectives:

1. Apply statistical tools to make inference about, a single binomial proportion or two sample proportions.
2. Understand and explain the various forms of measures of association by estimating properties of different measures of association from retrospective, cross-sectional and prospective studies.
3. Analyze three-way tables.
4. Understand the fundamental importance of the logistic model.
5. Appreciate the strengths and limitations of matched sample designs.

Course Policies

Assignments

- Students are expected to work independently, unless otherwise specified. **Offering and accepting** solutions from others is an act. of **plagiarism**, which is a serious offense and **all involved parties will be penalized according to the Academic Honesty Policy.** Discussion amongst, students is encouraged, but. when in doubt., direct, your questions to the instructor or teaching assistant..
- **No late assignments will be accepted under any circumstances.**
- Students are expected to show and explain how the answers were obtained.
- All electronically **submitted work must be in pdf format** or a standard file format such as doc, jpeg, etc.

Homework/Quizzes

There will be homework assigned on a regular basis as *suggested homework* (not. to be turned in) containing data, analysis problems and/or book exercises. Suggested homework will be posted under "Assignments". A *timed* quiz assignment, (based on the suggested homework) will be administered either as

- In-class (closed notes).
- Online (Only 1 attempt.. It. is highly encouraged to use a **reliable device** with a **reliable wired ethernet internet connection.** As soon as work is submitted a grade of 0 will show up as a placeholder until the assignment, is graded.)

but which format will be used, will not be announced prior. For the best preparation students are encouraged to complete the full suggested homework set by the deadline posted on the suggested homework, indicating when you should be ready to take the quiz.

Solutions to suggested HW will not be posted, but solutions to the quizzes will be.

Exams

There will be three (3) in-class exams that will comprise of multiple choice questions (20%) and some open-ended questions (80%). Exams will emphasize more on conceptual questions while HW/Quizzes will be more computational (not always).

Important dates:

Exam #1 September 29, 2016
 Exam #2 October 27, 2016
 Exam ϕB December 14, 2016

Grading

Change of grade: Grades will be changed only when an error has been made by the instructor.

Grade distribution:

Exams 1, 2 and 3 75% (20% lowest, 27.5% best two)
 Homework/Quizzes 25% (lowest 2 scores are dropped)

Letter grade distribution:

B+	84 to < 87	A	91 to 100	A-	87 to < 91
C+	74 to < 77	B	80 to < 84	B-	77 to < 80
D+	64 to < 67	C	70 to < 74	C-	67 to < 70
E	< 55	D	60 to < 64	D-	55 to < 60

There will be *no rounding up* of scores. To view the result of the letter grades to your GPA please visit UF registrar

Attendance/Make-up

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

(Additional) Make-up policy requirements:

- Every effort should be made to complete the assignment/exam during the open period. Only extreme situations will warrant a makeup. Contact the instructor prior to the exam - as soon as you realize you will be unable to take the assignment/exam at the scheduled time. Each case will be reviewed individually. Valid and detailed documentation is a prerequisite for scheduling a makeup under such extenuating circumstances.

- If you have an emergency on the day of the assignment/exam, the instructor must be contacted by midnight of the day of the assignment/exam.
- Additional Note: Being on vacation or booking a trip prior to the completion of the semester is not a valid reason to request a makeup. Please reference the Academic Calendar

Incomplete: An incomplete grade may be assigned at the discretion of the instructor as an interim grade for a course in which the student has completed a major portion of the course with a passing grade, been unable to complete course requirements before the end of the term because of extenuating circumstances, and obtained agreement from the instructor and arranged for resolution of the incomplete grade in the next term. Instructors are not required to assign incomplete grades. For complete details please visit the registrar's course policies.

Getting help

For issues with technical difficulties for e-learning in Canvas, please contact the UF Help desk at:

- <https://lss.at.ufl.edu/help.shtml> or <http://helpdesk.ufl.edu/>
- 352-392-4357 - select option 2
- e-mail at helpdesk@ufl.edu.

Any requests for make-ups due to technical issues **MUST** be accompanied by the **ticket number** received from LSS when the problem is reported to them. The ticket number will document the time and date of the problem. You **MUST** contact your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Complaints/Praises: Should you have any complaints/praises with your experience in this course you can always address them to the instructor at athienit@ufl.edu, or you may contact Ms. Tina Greenly tgreenly@ufl.edu of the Department of Statistics to submit a complaint. You may submit anonymous e-mail using:

- <http://anonymouse.org/anonemail.html> (No reply option, there is a time delay)
- <https://anonymousemail.me/> (Has optional reply option. Requires entry in the **From** field so put a fake address, e.g. fake@fake.com)

Both of these sites have been tested and no personal information or IP addresses are available. Feel free to test them.

For complaints that are not satisfactorily resolved at the department level or which seem to be broader than one department, students are encouraged to review the UF Complaints Policy.

Other general UF Policies

Accommodating Students with Disabilities: Students with disabilities requesting accommodations should first register with 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.

Academic Misconduct: Students are held accountable to the UF Honor Code.

Evaluations: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Tentative Course Outline

The course will cover chapters 1-10 in the text.