

## LING 5075 Quantitative method in Linguistics

Instructor: Xian Zhang

Class location: Discovery Park B142

Email: [xian.zhang@unt.edu](mailto:xian.zhang@unt.edu)

Office location: Discovery Park G178C

Office Hours: Monday, 5:00 – 6:00 pm; Or by appointment

### Course Objectives

This course provides an introduction to statistic methods to analyze quantitative data in linguistics and applied linguistics. Data elicitation techniques that are commonly used in linguistics and applied linguistics will be first discussed. Methods of data description and analysis using statistic package SPSS will be introduced. Upon completion of the course, students are expected to be able to analyze a self-collected quantitative dataset or a dataset provided by the instructor. Equipped with knowledge in quantitative analysis, students will be able to apply the skill in other fields.

### Course Requirements

1. **Homework.** There are a few sets of homework involving data elicitation, data description, and data analysis.
2. **Participation.** Students are supposed to participate in class discussions.
3. **Leading discussant.** Each student will act as a leading discussant twice starting from Feb, 18 (sign up [here](#)). The leading discussant will present an empirical study that employ the statistic method covered in a previous week (e.g., week 6 should present a study using either correlation or t-test). Upload the paper to Canvas before the previous Friday so that other classmates can read the paper. In the critical review, the leading discussant should first present the empirical study (literature review, research questions/ hypothesis, and method). The focus of the presentation should be on the quantitative analysis of the study. (20 minutes).
4. **Analysis of datasets.** Students are required to collect a dataset and perform adequate quantitative analyses on the dataset and write a short report (1-2 pages).

### Textbook

Larson-Hall, J. (2010). *A guide to doing statistics in second language research using SPSS*. New York: Routledge. (LH)

## Tentative schedule

W	Date	Topic	Reading	Presentation
1	Jan 14	Introduction		
2	Jan 21	MLK day, no class	LH (Ch 2)	
3	Jan 28	Basics variables, data, inferencing	LH (Ch 4, 5)	
4	Feb 4	SPSS environment, descriptive statistics	LH (Ch 1 & 3)	
5	Feb 11	correlation & t-tests	LH(Ch 8 & 9)	
6	Feb 18	ANOVA & ANCOVA	LH(Ch 10 & 13)	correlation/t-test
7	Feb 25	Regression	LH (Ch 7)	ANOVA
8	Mar 4	Data analysis		
9	Mar 11	Spring break, no class		
10	Mar 18	Factorial analysis (GLM) I	LH(Ch 11)	Regression
11	Mar 25	Factorial analysis (GLM) II	LH(Ch 12)	GLM 1
12	Apr 1	Chi-Square & Crosstab	LH(Ch 8)	GLM 2
13	Apr 8	Non-parametric tests	LH(Ch 14)	Chi-Square
14	Apr 15	Factor analysis	Zhang (2013)	Non-parametric
15	Apr 22	Multilevel analysis or MANOVA		Factor Analysis
16	Apr 29	Presentation		

### Course Grade based on 100 points

100-95	A
94-90	A-
89-85	B+
84-80	B
79-76	B-
75-70	C
69-66	C-
65-60	D
59-0	F

### Academic Dishonesty and Integrity

Students are expected to be familiar with UNT student standards of academic integrity that can be found at [https://policy.unt.edu/sites/default/files/untpolicy/pdf/7-Student\\_Affairs-Academic\\_Integrity.pdf](https://policy.unt.edu/sites/default/files/untpolicy/pdf/7-Student_Affairs-Academic_Integrity.pdf).

### Disability Accommodation Statement

“The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You

may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a neletter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.”