Nanchang University
STAT 27: Statistical Methods II

Credit: 4

Contact Hours

This course is composed of 24 lecture sessions, 3 tutorial sessions and 9 office contact hours. Each lecture session takes 2 contact hours in length; each tutorial session takes 3 contact hours in length;There will be a Q-A review session(3 contact hours) and Final Exam (3 contact hours)at the end of this term. This course has 72 contact hours in total.

Course Description

As the second part of the course, this part mainly focuses on three objectives: what specific statistical methods and tools are there when we analyze data; how to use and conduct this methods to analyze data; how to test and identify the assumptions from the results. With this course, students will learn to assess the credibility and value of inferences made from data, and making informed business decisions. The multiple regression models and regression analysis methods, as well as detailed practical aspects of linear regression models, dummy variables, different functional forms and the consequences of violation of the classical regression assumptions are systematically included.

Required Textbook

A First Course in Statistics, Global Edition by T. McClave, Terry, T. Sincich James. Pearson; 12th edition edition (October 23, 2017). ISBN-10: 1292165413, ISBN-13: 978-1292165417

Grading

- Class Attendance   10%
- Quizzes   10%
- Mid-term Exam   40%
- Final Exam   40%

A+	96-100	A	90-95	A-	85-89
B+	82-84	B	78-81	B-	75-77
C+	71-74	C	66-70	C-	62-65
D	60-61	F	< 60		

Course Schedule

The course has 24 class sessions in total. All sessions are 2 contact hours in length. At the end of this term, there will be a Q-A review session(3 contact hours) and Final Exam (3 contact hours).

Note: the course outline and required readings are subject to change.

Class 1:Inferences Based on a Single Sample
Class 2:Identifying and Estimating the Target Parameter
Class 3:Confidence Interval for a Population Mean: Normal (z) Statistic
Class 4:Confidence Interval for a Population Mean: Student's t-Statistic
Class 5:Confidence Interval for a Population Variance
Class 6:Inferences Based on a Single Sample
Class 7:The Elements of a Test of Hypothesis
Class 8:Formulating Hypotheses and Setting Up the Rejection Region
Class 9:Test of Hypothesis about a Population Mean: Normal (z) Statistic
Class 10:Test of Hypothesis about a Population Mean: Student's t-Statistic
Class 11:Test of Hypothesis about a Population Variance
Class 12:Mid-term Exam
Class 13:A Nonparametric Test about a Population Median
Class 14:Comparing Population Means
Class 15:Comparing Two Population Means: Independent Sampling
Class 16:A Nonparametric Test for Comparing Two Populations: Independent Samples
Class 17:Comparing Three or More Population Means: Analysis of Variance
Class 18:Simple Linear Regression
Class 19:Probabilistic Models
Class 20:Assessing the Utility of the Model: Making Inferences about the Slope β 1
Class 21:Using the Model for Estimation and Prediction
Class 22:A Nonparametric Test for Correlation
Class 23:Conclusion of the course and review
Class 24:Final Review

Attending Policy

Regular and prompt attendance is required. Under ordinary circumstances, you may miss two times without penalty. Each absence over this number will lower your course grade by a third of a letter and missing more than five classes may lead to a failing grade in the course. Arriving late and/or leaving before the end of the class period are equivalent to absences.

Policy on "Late Withdrawals"

In accordance with university policy, appeals for late withdrawal will be approved ONLY in case of medical emergency and similar crises.

Academic Honesty

Nanchang University expects all students to do their own work. Instructors will fail assignments that show evidence of plagiarism or other forms of cheating, and will also report the student's name to the University administration. A student reported to the University for cheating is placed on disciplinary probation; a student reported twice is suspended or expelled.

General Expectations:

Students are expected to:

— Attend all classes and be responsible for all materials covered in class and otherwise assigned;

— Complete the day's required reading and assignments before class;

— Review the previous day's notes before class and make notes about questions you have about the previous class or the day's reading;

— Participate in class discussions and complete required written work on time;

— Refrain from texting, phoning or engaging in computer activities unrelated to class during the class period;

— While class participation is welcome, even required, you are expected to refrain from private conversations during the class period.

Special Needs or Assistance

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.