



## Nanchang University STAT 21: Applied Statistics

**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***

Students who complete STAT 21 are expected to have mastered the fundamental ideas of Data Analysis; Correlation & Regression; Probability; Hypothesis Testing; Confidence Intervals; Regression; and Analysis of Variance.

### ***Required Material***

*Probability & Statistics for Engineers and Scientists*, Sheldon Ross, Kindle eBook

### ***Grading***

- Participation 10%
- Homework 20%
- Midterm 1 20%
- Midterm 2 20%
- Final Exam 30%

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:

Introduction to the course

Chapter 3: Elements of Probability

Class 2:

Review of assignments

Chapter 3: Elements of Probability (Cont.)

Class 3:

Review of assignments

Probability Distributions

Class 4:

Review of assignments

Chapter 4: Random Variables and Expectation

Class 5:

Review of assignments

Chapter 4: Discrete / Continuous Random Variables (Cont.)

Class 6:

Review of assignments

Chapter 5: Special Random Variables

Class 7:

Chapter 5: Jointly Distributed Random Variables

Class 8:

Review for the midterm No.1

Midterm No. 1

Class 9:

Review of midterm No.1

Class 10:

Chapter 6: Distributions of Sampling Statistics

Class 11:

Review of assignments

Chapter 6: Distributions of Sampling Statistics (Cont.)

Class 12:

Review of assignments

Chapter 7: Parameter Estimation



Class 13:

Review of assignments

Chapter 7: Parameter Estimation (Cont.)

Class 14:

Review of assignments

Chapter 8: Hypothesis Testing

Class 15:

Chapter 8: Hypothesis Testing (Cont.)

Class 16:

Review for midterm No. 2

Class 17:

Midterm No. 2

Class 18:

Chapter 9: Regression

Class 19:

Review of assignments

Chapter 9: Regression (Cont.)

Class 20:

Chapter 10: Analysis of Variance

Class 21:

Review of assignments

Chapter 10: Analysis of Variance (Cont.)

Class 22:

Review of assignments

Chapter 12: Nonparametric Hypothesis Test and Linear Regression and Correlation

Class 23:

Chapter 12: Nonparametric Hypothesis Test and Linear Regression and Correlation (Cont.)

Class 24:

Review for Final exam



## ***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.