

# Statistics (Spring 2021)

Lecturer: Dr. Fu-Min Tseng

Email: ftseng@ccu.com

Office Hours: Wednesday 1:00 PM-3:00 PM

Teaching Assistant: Ming-Gao Hsu

Email: hsu.ming.gao@gmail.com

## Course Description/Objectives

This course presents material from probability and statistics that constitutes the necessary underpinnings for the successful study of introductory econometrics. The first part of the course will cover sampling distribution, point estimation and interval estimation in the first volume of Lin and Chen's book. It will then move to a discussion of hypothesis tests and variance analysis. Finally, we will discuss  $\chi^2$  distribution. If there is time, we will also introduce simple linear regression.

## Grading:

Quizzes or Assignments	20%
Midterm Exam	35%
Final Exam	35%
Attendance	10%
Total	100%

## Course Materials:

1. 林惠玲、陳正倉 (2009), 「統計學方法與應用, 四版」, 雙葉書廊出版
2. Assignments.
3. Everything discussed in class and recitation sessions.

## Course Requirements

The direct course requirements are straightforward. You must (1) take exams and (2) do homework assignments and hand them in on time.

**Attendance:** Attendance will not be taken in the class. However, the course is designed with the idea that you will show up in class regularly. You are responsible for any material, written assignments, reading material, etc, covered or assigned in class. Homework assignments are to be submitted in class.

**Homework Assignments:** Homework assignments are designed to improve your understanding of concepts and help prepare you for exams. Homework assignments must be submitted in class. Homework submitted by email will not be accepted. **No late homework will be accepted.** You are encouraged to work together on homework problems, **but you must write up the assignment individually.**

**Missed homework and exams:** There will be no makeup homework. If you fail to turn in homework on time, you will receive a zero for that homework. If you have an excused absence such as a university-sponsored activity, I will accept homework assignments in advance of the due date. If you have a valid, documented excuse for missing a class at which a homework assignment is due, you should see me as soon as possible after the missed class.

There will be no make-up exams. If you have a valid, documented excuse for missing an exam, you will be excused from that exam. The weight of the missed exam will be shifted to the next exam. In

the case of a valid, documented excuse for missing an exam, you should inform me before scheduled exam time that you will miss the exam, unless circumstances make it impossible for you to do so.

## **Exams**

Midterm Exam: 4/20 (Tuesday)

Final Exam: 6/22 (Tuesday)

## **Topics Covered:**

The course topics will cover basic areas from Statistics and Probability. These topics can be found in the textbook.

1. Sampling distribution (Chapter 9)
2. Point Estimation (Chapter 10)
3. Interval Estimation (Chapter 11)
4. Hypothesis Test (Chapters 12 and 13)
5. Simple linear regression (Chapter 15)