國立台灣科技大學 114學年 第2學期　課程大綱

Spring 2026 NTUST Course Outline

授課教師：楊維寧

Instructor:Wei-Ning Yang

課程名稱：統計學(下)

Course Title：Statistics (II)

2026/11/3

課程代號： MI306B001 Course Code 學分數： 3 Credits	必選修：必修/全學年 Required/Electve:Required/Full Yr. 先修課程： Prerequisites
節次教室： Time/Location	R6(MA-303) R7(MA-303) R8(MA-303)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	Statistics II aims at statistical inferences which try to "guess" population parameters based on sample data. Statistical inference consists of two topics --- hypothesis testing and interval estimation. Statistical inference infers population parameters based on sample data and assesses the sampling errors through probability statements. Specifically, we discuss several sample statistics and their associated sampling distributions which are used for assessing the sampling errors.
課程大綱： Outline of Lectures	Week 1 Introduction to statistical inference Week 2 Sample statistics and sampling distributions Week 3 Rationale behind statistical inference Week 4 Rationale behind hypothesis testing Week 5 Hypothesis testing on population proportion Week 6 Rationale behind interval estimation Week 7 Confidence interval on population proportion Week 8 Review and midterm exam. Week 9 Hypothesis testing and confidence interval on population mean Week 10 Hypothesis testing on population variance Week 11 Confidence interval on population variance Week 12 Hypothesis testing on difference of two population means Week 13 Confidence interval on difference of two population means Week 14 Hypothesis testing on ratio of two population variances Week 15 Confidence interval on ratio of two population variances Week 16 Review and final exam.
授課方式： Method of Instruction	講授 Lecture：100% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	
參考書目： References	1. Probability & Statistics for Engineers and Scientists, 9th edition (Walpole/Myers/Myers/Ye) 2. Statistics (in Chinese) (Wei-Ning Yang)

修課須知： Notice	TA: James (Truc Vo Van) e-mail: votruc241196@gmail.com Video-link: https://drive.google.com/drive/folders/1A6pz4IB-DncTOVJPiGX4DUd9atbCY7pJ?usp=sharing
評量方式： Grading	Quiz 30% Midterm 30% Final 40%
備註說明： Notes	Background of Statistics I is required. This is an EMI course.