

Quantitative Research Methods

Goal

1. Review some basic statistical concepts, theories, and procedures.
2. To be familiar with various advanced statistical methods.
3. To develop the ability to conduct basic and advanced statistical methods using statistical software as well as explain the output correctly.

Instructor :

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Schedule

Thursday, session 2-4 (09:00-12:00)

Outline

date	Topic
2/22	Course introduction & arrangements
2/29	Scientific researches and quantitative methods (Chapter 1)
3/07	Variables and measures (Chapter 2), Coding and data input (Chapter 3)
3/14	Data checking and manipulation (Chapter 4)
3/21	Break
3/28	Descriptive statistics (Chapter 5)
4/04	Tomb Sweeping Festival / Children's Day
4/11	Midterm I
4/18	Categorical data analysis (Chapter 6)
4/25	Categorical data analysis (Chapter 6)
5/02	<i>t</i> tests (Chapter 7)
5/09	<i>t</i> tests (Chapter 7)
5/16	Midterm II
5/23	Analysis of variance (Chapter 8)
5/30	Analysis of variance (Chapter 8)
6/06	Factorial analysis of variance (Chapter 9)
6/13	Factorial analysis of variance (Chapter 9)
6/20	Final

Assessments

1. Homework (40%)
Homework will be assigned depending on the topic. The due date is one week after homework being announced. Only digital version will be accepted and students can turn in their homework online via Moodle. **Cut and paste original computer output is prohibited!** A well explanation to each part of the question is necessary.
2. Midterm and Final examine (60%)
There will be two Midterms and one final examine. Each examine will take 3 hours to finish.

The date is scheduled as above, whereas the time and location are the same as this class. No makeup examine will be held, so **make sure to attend each examine**. Any reason will **NOT** be accepted if you miss it, except for medical reasons. However, a legitimate document that explains why you had to miss the examine should be provided by the medical staff within 24 hours. The decision of how to makeup is different from person to person, and student should make an appointment with me to discuss the missed examine as well as personal makeup plan.

Textbook

邱皓政，(2019)。量化研究與統計分析- SPSS 與 R 資料分析範例解析(第六版)。台北：五南圖書公司。

Note

Students who wish to enroll this course with limit **HAVE TO** attend the vary first class and provide the reason for enrollment in advance.

Integrating ethical guidelines for generative AI into NTHU course:

After careful consideration, the instructor of this course deems it inappropriate to use generative artificial intelligence in this class. This is because the content within generative AI may adversely affect students' understanding of foundational knowledge. In accordance with the published Guidelines for Collaboration, Co-learning, and Cultivation of Artificial Intelligence Competencies in University Education, this course adopts the following policy: **Prohibited use**

Students enrolled in this course should be aware that they may not submit assignments, reports, or personal reflections generated using artificial intelligence. If such usage is discovered, instructors, the institution, or relevant units have the right to reevaluate the assignment or report or withhold scores. Students enrolled in this course agree to the above ethics statement if registering for the class.