

國立中正大學課程大綱

National Chung Cheng University Syllabus

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| 課號 course code | 3405053 | 全英文授課 EMI | <input type="checkbox"/> yes <input checked="" type="checkbox"/> no |
| 課程類別 course type | <input type="checkbox"/> humanistic care course <input type="checkbox"/> competition <input type="checkbox"/> problem-based course <input type="checkbox"/> project-based course <input type="checkbox"/> capstone course <input type="checkbox"/> practical course <input type="checkbox"/> internship <input checked="" type="checkbox"/> others | | |
| 課程名稱 (中文) course name (Chinese) | 高等統計學 | | |
| 課程名稱 (英文) course name (English) | Advanced Statistics | | |
| 學年 academic year /semester | 2026/ Spring | 學分 credits | 3 credits |
| 學系 (所) department | Department of Adult and Continuing Education | 必選修 required/selected | <input type="checkbox"/> required <input checked="" type="checkbox"/> elective |
| 上課時間 class hours | Tuesday, 9:10-11:00 a.m. | 上課地點 classroom | College of Education Hall Building II 557 R |
| 教師 instructor | Yu-Shu Chen | 教師 email Instructor's email | tasmj3000@gmail.com |
| 助教 teaching assistant | Yi-Zhen Lai | 助教 email TA's email | |
| 先修科目或 先備能力 prerequisites | Introduction to statistics (3 credits) | | |
| 課程概述 course descriptions | <p>Research that establishes mechanisms by which effects operate or the conditions that facilitate and inhibit such effects deepens our understanding of the social phenomena. Mediation, moderation, and moderated mediation analysis are frequently used to establish evidence or test hypotheses about such mechanisms. This course will provide a conceptual overview and examples of quantitative methodology related to moderation, mediation, and conditional process analysis.</p> | | |
| 學習目標 learning objectives | <p>On completion of this course students should be able to:</p> <ul style="list-style-type: none"> ● understand knowledge of statistical methodologies (including the main concepts and methods of inference and modelling) ● apply statistical techniques based on the main theories and concepts about moderation, mediation, and conditional process analysis ● analyze parameter estimates, including testing hypotheses on the effects of moderation, mediation, and conditional process analysis ● evaluate the education on matters relating to and/or requiring the use of mediation, | | |

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| 教科書及參考書 textbooks and references | <p>moderation, and conditional process analysis.</p> <p>Textbooks</p> <ul style="list-style-type: none"> Hayes, A. F. (2022). <i>Introduction to mediation, moderation, and conditional process analysis: A regression-based approach</i> (3rd ed.). New York: Guilford <p>Suggested Readings</p> <ul style="list-style-type: none"> Leech, N. L., Barrett, K. C., & Morgan, & G. A. (2014). <i>IBM SPSS for intermediate statistics: Use and interpretation</i> (5th ed.). Routledge. Howell, D. C. (2012). <i>Statistical methods for psychology</i> (8th ed.). Stamford, CT: Cengage Learning. MacKinnon, D. P. (2012). <i>Introduction to statistical mediation analysis</i>. Routledge. <p>Journals</p> <ul style="list-style-type: none"> Applied Measurement in Education Applied Psychological Measurement Educational and Psychological Measurement Journal of Applied Measurement Journal of Educational Measurement Multivariate Behavioral Research Organizational Research Methods Psychological Bulletin Psychological Methods Sociological Methodology Sociological Methods and Research Structural Equation Modeling <p>Software</p> <p>The following software (programs) will be explored during the course:</p> <ul style="list-style-type: none"> IBM SPSS (Statistical Package for Social Sciences). Microsoft Excel. <p>Note: Please respect copyrights and intellectual property rights.</p> |
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| 教學要點概述 | | | |
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| 教材編選 teaching materials | <input checked="" type="checkbox"/> self-editing ppt <input type="checkbox"/> teaching computer programs | <input checked="" type="checkbox"/> handouts <input type="checkbox"/> self-editing films | <input type="checkbox"/> self-edition textbooks <input type="checkbox"/> others |
| 教學方法 teaching method | <input checked="" type="checkbox"/> lecture <input type="checkbox"/> PBL | <input checked="" type="checkbox"/> small discussion <input type="checkbox"/> case study | <input checked="" type="checkbox"/> oral presentation <input type="checkbox"/> others |
| 評量方法 evaluation tools | <input type="checkbox"/> midterm exam 0% <input type="checkbox"/> in-class assignments <input checked="" type="checkbox"/> final report 30% <input checked="" type="checkbox"/> participation 30% <input checked="" type="checkbox"/> Students can get extra credits by collecting stickers. | <input type="checkbox"/> final exam 0% <input checked="" type="checkbox"/> take-home assignments 40% <input type="checkbox"/> projects 0% | <input type="checkbox"/> quizzes 0% <input type="checkbox"/> midterm report 0% <input type="checkbox"/> rubrics 10% |

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| | <p>Assignments</p> <ul style="list-style-type: none"> Assignment 1 (10%): Please refer to the sample provided by the professor to create your own resume. Assignment 2 (20%): Students are required to collect 3 qualifying exam questions from doctoral programs in international universities and 3 from domestic universities over the past 5 years, indicating the university and department that issued each question. Assignment 3 (30%): students have to choose an empirical paper, using mediation, moderation, and/or moderated mediation models as research frameworks, from SSCI. Make PowerPoint slides and do a 10-min oral presentation. <p>Classroom rules</p> <ul style="list-style-type: none"> Be punctual Be prepared Be engaged Make contributions to the happy learning climate. |
| 教學資源 teaching resources | <input checked="" type="checkbox"/> eCourse 2 <input type="checkbox"/> digital files <input type="checkbox"/> the website of intern |
| 教師 相關訊息 instructor's information | <ul style="list-style-type: none"> Prof. Yu-Shu Chen University of Minnesota, Ph.D. (human resource development) Research interests: organizational creativity, creativity development, creative problem solving, human resource development, statistical methodology Office location: the College of Education Hall 314 R Office hours: Tuesday, 12:10 to 14:00 p.m. Telephone: (05) 2720411 ext. 36114 |
| 每週課程內容 weekly scheduled contents | |
| <p>Week 1 (2/26)</p> <ul style="list-style-type: none"> Topic: Introduction Readings: syllabus & handouts | |
| <p>Week 2 (3/5)</p> <ul style="list-style-type: none"> Topic: statistical modeling Readings: Hayes, chap1 & handouts | |
| <p>Week 3 (3/12)</p> <ul style="list-style-type: none"> Topic: simple linear regression Readings: Hayes, chap.2 & handouts | |
| <p>Week 4 (3/19)</p> <ul style="list-style-type: none"> Topic: multiple regression Readings: Hayes, chap. 3 & handouts | |
| <p>Week 5 (3/26)</p> <ul style="list-style-type: none"> Topic: the simple mediation model 1 Readings: Hayes, chap. 4 & handouts | |

Week 6 (4/2)

- Topic: the simple mediation model 2
- Readings: Hayes, chap. 4 & handouts

Week 7 (4/9)

Topic: multiple mediator models 1

Readings: Hayes, chap. 5 & handouts

Week 8 (4/16)

- Topic: multiple mediator models 2
- Readings: Hayes, chap. 5 & handouts

Week 9 (4/23)

Topic: The midterm exam

Readings: handouts

Week 10 (4/30)

- Topic: the simple moderation model 1
- Readings: Hayes, chap. 7 & handouts

Week 11 (5/7)

- Topic: the simple moderation model 2
- Readings: Hayes, chap. 7 & handouts

Week 12 (5/14)

- Topic: extending moderation analysis principles 1
- Readings: Hayes, chap. 8 & handouts

Week 13 (5/21)

- Topic: extending moderation analysis principles 2
- Readings: Hayes, chap. 8 & handouts

Week 14 (5/28)

- Topic: the conditional process model 1
- Readings: Hayes, chap. 10 & handouts

Week 15 (6/4)

- Topic: the conditional process model 2
- Readings: Hayes, chap. 10 & handouts

Week 16 (6/11)

- Topic: self-direct learning (a field trip)
- Readings: handouts

Week 17 (6/18)

- Topic: self-direct learning
- Readings: handouts

Week 18 (6/25)

- Topic: The final exam
- Readings: handouts

成教所核心能力
core competencies of ACE

| Core competency | | Degrees of related to core competency | | | | |
|---------------------|-------------------------------|---------------------------------------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Specific competency | Teaching | | | V | | |
| | Project planning | | V | | | |
| | Administration and leadership | | V | | | |
| | Research | | | | | V |
| Competence | Communication | | | V | | |
| | Problem solving | | | | V | |
| | Critical thinking | | | | V | |
| | Creative thinking | | | V | | |
| | Wisdom technology | | | | V | |