

Tamkang University Academic Year 111, 2nd Semester Course Syllabus

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| Course Title | ECONOMETRICS | Instructor | LIU, CHIA-HUA |
| Course Class | TLEXB3A DEPARTMENT OF INDUSTRIAL ECONOMICS, 3A | Details | <ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester |
| Relevance to SDGs | SDG3 Good health and well-being for people SDG4 Quality education SDG5 Gender equality SDG8 Decent work and economic growth | | |
| Departmental Aim of Education | | | |
| I. Training up students to establish the specialized knowledge in industrial economics. II. Training up students to strengthen the diversity of knowledge in learning. III. Training up students with the ability in researches. IV. Training up students with the self-cultivation in moral character. V. Training up students with the macroscopic vision in globalization. VI. Training up students with the leadership in industrial development. | | | |
| Subject Departmental core competences | | | |
| A. With the basic knowledge of industrial economics related areas.(ratio:5.00) B. With the ability of tracking the trend of industrial development.(ratio:50.00) C. With the ability of continuously learning diversified knowledge in cross field.(ratio:5.00) D. With the potential in academic researches.(ratio:5.00) E. With the ability of combining economic theories and applications to improve his/her job competence.(ratio:35.00) | | | |
| Subject Schoolwide essential virtues | | | |
| 1. A global perspective. (ratio:7.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:30.00) 4. Moral integrity. (ratio:7.00) 5. Independent thinking. (ratio:7.00) 6. A cheerful attitude and healthy lifestyle. (ratio:7.00) | | | |

7. A spirit of teamwork and dedication. (ratio:7.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction

This course introduces linear regression models for the analysis of economic phenomena, statistical properties of the models, and various methods of estimation and statistical inferences. It covers in depth the special features of various econometric models and economic data, and appropriate estimation and inference methods for each model.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

| No. | Teaching Objectives | objective methods |
|-----|--|-------------------|
| 1 | i. Enhance students' understanding of econometrics concepts ii. Apply econometric theory to the analysis of economic data. iii. Provide a basic training for empirical researches for students' theses | Cognitive |

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

| No. | Core Competences | Essential Virtues | Teaching Methods | Assessment |
|-----|------------------|-------------------|---|---|
| 1 | ABCDE | 12345678 | Lecture, Discussion, Practicum, Imitation | Testing, Study Assignments, Discussion(including classroom and online), Practicum |

Course Schedule

| Week | Date | Course Contents | Note |
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| 1 | 112/02/13~ 112/02/19 | Introduction to the Course; Review for regression inference (Using Stata) | |

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| 2 | 112/02/20 ~ 112/02/26 | Review for regression inference (Using Stata) | |
| 3 | 112/02/27 ~ 112/03/05 | Heteroskedasticity and types of estimation bias | |
| 4 | 112/03/06 ~ 112/03/12 | Heteroskedasticity and types of estimation bias | |
| 5 | 112/03/13 ~ 112/03/19 | Multiple regression models-with binary explanatory variables | |
| 6 | 112/03/20 ~ 112/03/26 | Multiple regression models-with binary explanatory variables | |
| 7 | 112/03/27 ~ 112/04/02 | Multiple regression models-with binary explanatory variables | |
| 8 | 112/04/03 ~ 112/04/09 | no class | |
| 9 | 112/04/10 ~ 112/04/16 | Review for the midterm exam | |
| 10 | 112/04/17 ~ 112/04/23 | Midterm Exam Week | |
| 11 | 112/04/24 ~ 112/04/30 | Return the graded exam, and discuss the answers and the weakness. | |
| 12 | 112/05/01 ~ 112/05/07 | Difference-in-differences | |
| 13 | 112/05/08 ~ 112/05/14 | Panel Data: Random effects model and fixed effects model | |
| 14 | 112/05/15 ~ 112/05/21 | Panel Data: Random effects model and fixed effects model | |
| 15 | 112/05/22 ~ 112/05/28 | Instrumental variables models | |
| 16 | 112/05/29 ~ 112/06/04 | Instrumental variables models | |
| 17 | 112/06/05 ~ 112/06/11 | Review for the final exam | |
| 18 | 112/06/12 ~ 112/06/18 | Final Exam Week | |
| Requirement | | | |
| Teaching Facility | | Computer, Projector, Other (blackboard) | |
| Textbooks and Teaching Materials | | Jeffrey M. Wooldridge, Introductory Econometrics: A Modern Approach, 7th edition | |
| References | | Statistics for Business and Economics by David R. Anderson, Dennis J. Sweeney and Thomas A. Williams (ASW), South-Western College Publishing. 11th edition or any previous edition | |
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| Number of Assignment(s) | (Filled in by assignment instructor only) |
| Grading Policy | <p>◆ Attendance : 15.0 % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : 35.0 %</p> <p>◆ Other () : %</p> |
| Note | <p>This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php.</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p> |