

授業科目名： データ分析特論 Special Topics of Data Analysis		担当教員名： 陳柏宇、窪田悠一 Boyu Chen, Yuichi Kubota	
選択/必修： 選択 Elective	単位数： 2	セメスター： 1 後 1 Fall	開講言語： English
○授業の到達目標及びテーマ Assuming that students have acquired basic knowledge of statistics and data analysis, this course aims to equip students with rather advanced data analysis ability through practice. Upon the completion of this course, students are expected to be familiar with the quantitative methods which are frequently used in social sciences. They are also expected to be able to apply those methods to the analyses of real-world issues.			
○授業の概要 This is an advanced course of “Method and Application of Data Analysis”. In each class, course instructor will explain the theory and its development of a specific analytical method first, and then students are expected to apply the method to real-world data and replicate previous studies. Through this process, students are expected to deepen their understanding of how to conduct quantitative analysis on policy issues, as well as improve their skills of using various data processing (statistical) software. The classes will consist of two parts. The first part (Chen) will review the ordinary least square (OLS) method and look at logit/probit analysis as well as principal component analysis/factor analysis. The second part (Kubota) discusses methods such as the structural equation modelling, propensity score matching, and methods of instrumental variable and two-stage least square.			
○授業の方法 1) This course will be offered in English. 2) In each class meeting, students are provided materials such as handouts and PPT slides that lecture will be based on. 3) Students are expected to complete reading assignments before they come to the class, and actively participate in Q & A and discussion in class.			
○授業計画 Co-teaching class/15 times 1 st week: course guidance 2 nd week: review of OLS 3 rd week: logit/probit analysis 4 th week: ordered probit analysis 5 th week: multilevel analysis 6 th week: multivariate analysis of variance (MANOVA) 7 th week: principal component analysis/factor analysis			

8th week: panel data analysis

9th week: multinomial selection model

10th week: event history analysis/survival analysis

11th week: structural equation modelling

12th week: propensity score matching

13th week: instrumental variable method and two-stage least square method

14th week: Latent class analysis

15th week: Review session

○テキスト

This course will not use any specific textbook. Reading materials will be presented in class.

○参考書・参考資料等

To be presented in each week.

○学生に対する評価

1) Participation to class discussion : 10%

2) Report: 90% (45% × 2)