Multilevel Statistical Analysis

- **Who**
  Ching-Fan Sheu

- **When and where**
  Class meets on Th. 13:10-16:00 at 75309 Information Technology Building

- **Office hours**
  By appointments

- **Description**
  This is an introduction to multilevel data analysis in social, educational, and health sciences research. The course focuses on using examples to illustrate the practical applications of multilevel statistical models.

- **Prerequisite**
  Basic knowledge of regression and analysis of variance.

- **Objectives**
  The students will learn to use the open software R to analyze clustered and longitudinal data using multilevel statistical models.

- **Textbooks**

Additional course materials will be made available at the course web page.

- **Requirements**
  Every student's course grade will be based directly on her or his overall course score. The student's score will be a weighted average of the scores earned on three course requirements. They are:
  - Class participation (30%)
  - Tutorial presentation (30%)
  - Research project (40%)

Class participation is self-explanatory. You can also boost your class participation by posting solutions to exercise problems on Moodle. A tutorial presentation will require the student to master a specific model and data example in sufficient details to share his or her understanding of the analysis with fellow classmates in a classroom demonstration. A term project should involve a meaningful application of multilevel models in an area of student's research interest. The project report should not exceed 12 pages excluding figures and tables (unedited computer output will not be accepted). The print format should be set to double-spaced, 12-point Time-Roman font, and one-inch margins on all sides of the page (consult your APA Publication Manual). A one-page description of the project proposal (typed) should be submitted to the instructor for approval on or before by midterm. You must state clearly the problem your study will address and describe briefly how you will conduct the study. You are
encouraged to discuss project topics with the instructor. The project report is due on the last day of the class. It is recommended that you make a backup copy of the paper before handing it in. Once grade is assigned, the project report cannot be improved on to change your course grade later. Without documented emergencies, permission will NOT be granted to individual students seeking to turn in late assignments, to take tests late, or to be excused from one or more course requirements. Any documentation for late work must be turned in with the late assignments within three working days of returning to the class.

Student survey form