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一、教學目標：

Regression analysis is a highly general data analytic framework. It is used to model the relationship between a **dependent variable** and factors of interest, the **independent variables**. This semester we will examine quantitative as well as qualitative dependent variables, continuous and categorical independent variables, and uncorrelated and correlated errors.

二、教材內容：

1. General Introduction(1週)
2. Simple Linear regression (2週)
3. Multiple Linear regression (2週)
4. Diagnostics & Transformation (1週)
5. Analysis of Variance (2週)
6. 期中考(1週)
7. ANCOVA (1週)
8. Variable selection (1週)
9. Weighted least-square (1週)
10. Generalized Linear model, Logistic regression (2週)
11. Random effect and Mixed effect models (2週)
12. 期末考(1週)

三、實施方式：

課堂上課與作業演練 使用軟體：R

四、參考書目：

教科書:Simon Sheather (2009) A modern approach to regression with R. (圖書館有此電子書)
<http://www.stat.tamu.edu/~sheather/book/> (教科書相關網站)

五、計分方式：

1. Midterm Exam 30 %
2. Final exam 40 %
3. Assignments & Class discussion involvement 30 %
雲端硬碟 Regression -
<https://drive.google.com/folderview?id=0B8xpYHxdpvYxeFFMOU1hbnZONDQ&usp=sharing>