



THE UNIVERSITY OF QUEENSLAND

**Course title:** PUBH7631 Practical Regression Analyses

**Course coordinator:** Professor Gail Williams

**Mode:** Internal and External Flexible Delivery

**Course Introduction:**

This intermediate level course explores the methods and application of regression analysis in health research. Regression is used to model relationships between multiple variables and determine the magnitude of those relationships. You will examine a series of applications, with differing statistical issues, designs, and analytical approaches, set around a question involving multiple determinants or predictors of a health outcome. You must already have knowledge of basic statistical methods, at the level of the core course [PUBH7630 Introduction to Biostatistics](#).

**Course Aims:**

The course imparts knowledge and practical skills in the design and analysis of multivariable studies, including cross-sectional surveys, cohort studies and intervention studies. Emphasis is placed on careful planning, execution, and reporting of multivariate analysis, with a concentration on various statistical modelling techniques.

**Course Content:**

The course covers Normal-theory regression (analysis of variance and regression), Poisson regression, logistic regression, methods for dealing with missing data, sample size estimation in the context of a multivariable study, and model selection and goodness-of-fit diagnostics. You can choose to use either *SAS* or *Stata* as the accompanying statistical package.

**Method of Assessment:**

Assessment comprises assignments based around design issues and analysis of supplied datasets. By negotiation and with prior approval from the Course Coordinator this may include analysis of student-owned datasets.

**Required Text:** None

**Resources:**

**The Study Guide** contains the week-by-week learning materials. These include learning objectives, lecture notes, parallel statistical software instructions, required readings and practical exercises.

**An online Blackboard site** provides an interactive environment for students and teachers. Reliable and regular access to the Internet is essential.

You will require access to a **statistical software licence** (*SAS* or *Stata*) for use on personal computers, or will use SPH-licensed software in the computer laboratory on the Herston site.

**Further details** are provided in the [Course Profile](#).

[http://www.uq.edu.au/study/course.html?course\\_code=PUBH7631](http://www.uq.edu.au/study/course.html?course_code=PUBH7631)