### COURSE DETAILS
- **Course Code:** F79PS
- **Full Course Title:** Statistics for Social Science
- **SCQF Level:** 9
- **SCAF Credits:** 15
- **Available as Elective:** No

### DELIVERY LEVEL
- **Undergraduate:** Yes
- **Postgraduate Taught:** Yes
- **Postgraduate Research:** No

### COURSE AIMS
- To develop an understanding of specialised multivariate statistical techniques applied in the social sciences including linear modelling and generalised linear modelling methods
- To develop proficiency in applying these methods in the analysis of experimental data using standard statistical packages
- To further develop effective skills for writing reports and reporting conclusions of scientific study.

### LEARNING OUTCOMES – SUBJECT MASTERY
After studying this module, students should be able to:

- Understand the statistical theory of linear, nonlinear and multivariate methods in the social sciences
- Apply these methods to investigate practical problems in a social science context (principally psychology)
- Use their statistical expertise to draw valid conclusions from experimental data

### LEARNING OUTCOMES – PERSONAL ABILITIES
At the end of this module students should be able to:

- Demonstrate facility with the main statistical package used in social sciences (SPSS)
- Demonstrate an appreciation of the scientific problems to which statistical methods can be applied in psychology and other social sciences
- Present results from a statistical analysis in a way that demonstrates that they have understood the technical and broader issues of statistical methodology as applied in practical situations
- Manage time in order to meet report deadlines and to discuss statistical problems confidently with peers and colleagues

### SYLLABUS
Review of key statistical background: including probability as a frequency versus degree of belief, standard distributions, descriptive statistics & graphical methods, calculation and interpretation of confidence intervals for standard sampling situations; theory of hypothesis testing and simple tests of goodness of fit (Chi-squared, Kolmogorov-Smirnov); comparison of populations - including t-tests and non-parametric methods;

Linear modelling techniques: Regression (univariate and multivariate), analysis of variance (1-way, 2-way), definition and use of contrasts, analysis of Covariance, regression and ANOVA as special cases of Generalised Linear Models (GLM).

Multivariate methods: Principal component analysis and factor analysis - theoretical basis and practical application to data analysis in psychology

Further modelling methods: Generalised Linear Modelling, loglinear models, logit, probit analysis

Principles of questionnaire design

Reassessment not available for final year students