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

<table>
<thead>
<tr>
<th>COURSE RELATIONSHIPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Code</td>
</tr>
<tr>
<td>F78SC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION AND ASSESSMENT METHODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edi</td>
</tr>
<tr>
<td>Y</td>
</tr>
<tr>
<td>Y</td>
</tr>
<tr>
<td>Y</td>
</tr>
</tbody>
</table>