1. **Title of the module**

PSYC8010 (SP801) – Statistics and Methodology

1. **School or partner institution which will be responsible for management of the module**

School of Psychology

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 7

1. **The number of credits and the ECTS value which the module represents**

40 Credits (20 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Autumn and Spring

1. **Prerequisite and co-requisite modules**

None

1. **The programmes of study to which the module contributes**

Compulsory to:

Developmental Psychology, MSc-T Forensic Psychology, MSc-T

Political Psychology, MSc-T Group Processes, MSc-T

Cognitive Psychology/Neuropsychology, MSc-T Social and Applied Psychology MSc-T

Research Methods in Psychology, MSc-T Evolution and Human Behaviour, MSc-T

Political Psychology, MSc-T

Not available wild.

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
   1. Demonstrate a systemic understanding of the complex concepts and logic of statistical reasoning, using appropriate descriptive and inferential methods;
   2. Comprehensively understand the fundamentals of scaling and methods used for measuring psychological variables;
   3. Demonstrate a systemic understanding of the concepts of statistical model and model testing;
   4. Use software SPSS to manage data, conduct descriptive analyses and test hypotheses; use software AMOS to specify and test structural equation models;
   5. Interpret results of statistical analyses and outputs of statistical software; make inferences from the results in applied settings;
   6. Systematically evaluate the appropriateness of statistical analysis methods to research design and data;
   7. Effectively communicate results of statistical analyses orally and in writing.
   8. Demonstrate a systemic understanding of how to apply qualitative, correlational and experimental research methods
2. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**
   1. Demonstrate an understanding of complex theoretical positions and controversies related to methodology;
   2. Demonstrate an appreciation of the diverse applications of statistics and its relevance to students’ fields of study and social sciences more broadly.
3. **A synopsis of the curriculum**

This module provides a postgraduate-level orientation to both basic and advanced contemporary statistical and methodological issues in psychology. The methodological issues considered include qualitative research methodologies; experimental, quasi-experimental, and correlational research designs in the laboratory and field; and the fundamental issues in psychological measurement including reliability and validity. The statistical techniques taught include univariate and multivariate descriptive and inferential statistics; basic and advanced topics in ANOVA and ANCOVA; linear and logistic multiple regression; some scaling methods; classical test theory, factor analysis; fundamentals of structural equation modelling (path analysis, confirmatory factor analysis, multiple-group analysis), and some item response theory.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

* Howell, D. C. (2006). **Statistical methods for psychology (International Ed.)**. Belmont, CA: Duxbury Press. (Recommended for those in need of review of statistics; covers similar topics to the Autumn term, but many Autumn topics are not covered in any basic-level text.)
* Dancey, C. P., & Ready, J. (2007). **Statistics without maths for psychology (4th ed.)**. London: Pearson. (Exactly what it says; good review of basic concepts and SPSS for the equation-phobic)
* Field, A. (2012 or 2013). **Discovering statistics using SPSS (3rd edition of higher)** London: Sage. (Another introduction focusing on using SPSS)
* McDonald, R.P. (1999). **Test theory: A unified treatment**. Mahwah, NJ: Lawrence Erlbaum. (Relevant to the spring term; a great source of knowledge on psychometrics; particularly recommended for those who prefer concise algebraic treatment rather than a lot of text).
* Kline, R. B. (2010). **Principles and practice of Structural Equation Modeling (3rd ed.)**. New York: Guilford Press. (Relevant to the spring term; goes into more depth than the lectures)
* Byrne, B. M. (2010). **Structural equation modeling with Amos: Basic concepts, applications, and programming (2nd ed.)**. New York, NY: Taylor and Francis Group. (Relevant to the spring term; a step-by-step guide to fitting measurement models in AMOS; good companion when trying to model your own data).

1. **Learning and teaching methods**

Total contact hours: 110

Private study hours: 290

Total study hours: 400

1. **Assessment methods**
   1. Main assessment methods

Two In Class Tests, each formed of a separate 45 minute theory paper and a separate 2 hour computing paper.

13.2 Reassessment methods

Like for Like.

1. ***Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)***

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *8.3* | *8.4* | *8.5* | *8.6* | *8.7* | *8.8* | *9.1* | *9.2* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |
| **Private Study** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| *Lecture* | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| *Surgery* | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| *MCQ Theory In Course Tests* | **x** | **x** | **x** |  |  | **x** |  | **x** | **x** |  |
| *Computing In Course Assessments* | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

The curriculum of this module has been extended in the recent years to incorporate contemporary techniques and methodological approaches taught on internationally recognised statistics and measurement programmes. Specifically, we included in the module content the discussion of issues in measuring psychological variables in the international context, such as measurement invariance in cross-cultural research. Corresponding statistical techniques include Differential Item Functioning and multiple-group confirmatory factor analysis with measurement invariance constraints.

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**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 30/03/2017 | Major | September 2017 | 8 – 19 |  |
|  |  |  |  |  |

Revised FSO Jan 2018