UNIT GUIDE

Research Methods 3

BSc (Hons) Psychology
B.Sc. Psychology (Clinical)
B.Sc. Psychology (Developmental)
B.Sc. Psychology (Sexualities
BA/BSc Combined Honours – Psychology Field

2007/2008
Semester One

Division of Psychology
Faculty of Humanities & Social Sciences

website
http://www.lsbu.ac.uk/psycho/teaching/rm3-main.shtml

1. BASIC DATA

Title:	Research Methods 3
Reference Number:	TPS-2-213
Credit Value:	1
Level:	2
Semester:	1
Subject Area:	Psychology
Total study hours:	150
Class contact:	48 hours
Self-managed study:	102 hours
Prerequisites:	Successful completion of RM2
Co-requisites:	None
Assessment:	Practical report 40% Examination 60%
Unit Co-ordinator:	Dr. Christopher Sterling Room E343C Extension Blosk e-mail sterlicm@sbu.ac.uk
TEACHING TEAM:	Dr. Christopher Sterling (sterlicm@lsbu.ac.uk) Dr. Frances Lyons Germaine Symons Frances Lyons

Please Note: The teaching team can be contacted outside of official contact hours if you need advice. It is best to either e-mail them or arrange to meet them on Thursday afternoon. Their university e-mails will be provided as soon as they become available.

2. SHORT DESCRIPTION

This unit is aimed at students doing psychology who need to acquire enough of an understanding of psychological research methods and statistics to be eligible for the Graduate basis for Registration conferred by the British Psychological Society. Given that Research Methods and Statistics (RMS) is a vast topic area it is not possible to cover everything. Accordingly, this unit will cover those research methods of most importance and in most use.

RMS lie at the core of psychological knowledge because it deals with the ways in which such knowledge is acquired and interpreted. Developing the ability to conduct investigations and to evaluate others' research requires the co-ordination of different kinds of knowledge and skills. You need to understand the key characteristics of important research methods, of the conditions in which they are used, and of the kind of results they produce. It is also important that you know the strengths and weaknesses of different methods and hence to be able to evaluate the validity and reliability of their outcomes. One test of your understanding of research methods is your ability to design investigations appropriate to the research question being asked. Another important test of your understanding is you ability to analyse data in an appropriate way. This entails knowing which test to use and how to use a statistics package such as SPSS. Finally you need to know how to interpret the results of a test in the context of a particular hypothesis being tested.

3. AIMS

The aim of this unit is to help you develop the fundamental knowledge and skills needed to design, carry out, analyse, interpret and report small scale investigations using selected research methods and statistical techniques.

4. LEARNING OUTCOMES

Knowledge and Understanding:

- Describe the characteristics of selected research methods and know when they are used.
- Identify the strengths and weaknesses of these methods.
- Describe the characteristics of important statistical tests and know when they are used.
- Know how to interpret the results of these tests

Intellectual skills

- Generate research questions
- Design studies to explore these questions
- Analyse and interpret data appropriately

Practical Skills

- Collect data appropriately
- Use a sophisticated statistical package
- Report an investigation in an appropriate way.

Transferable Skills

- Operate as an independent and pragmatic learner
- Evaluate and present research findings

- Be sensitive to ethical and interpersonal factors

5. ASSESSMENT

There are two components to assessment

1. Coursework for 40% - A practical report of a small experiment which you design, execute, analyse and report. This will be carried out in small groups under the supervision of your seminar leader. You are required to submit a practical report, in the usual format, of no more than 2000 words. Further details and marking criteria will be provided separately.
2. Examination for 60%. A two hour exam at the end of the unit will test your knowledge of selected research methods and your ability to interpret the results of the analyses of different kinds of investigation. The allocation of marks to each section will be on the exam paper.

Notes about submitting coursework

Coursework deadlines are published on the Psychology Notice Board. It is your responsibility to ensure that you are aware of these dates. All coursework must be submitted to the School Office in Borough Road (B203).

1. When handing in coursework, you must:

   - complete the coursework submission form and attach it to the front of your coursework;
   - take the coursework to the School Office. Your submission form will be date stamped and a receipt issued. Please keep all receipts.

   You must not hand coursework to your unit co-ordinator or other lecturer.

2. Unless you have obtained a formal extension from your year tutor, coursework submitted:

   - up to two weeks after the deadline date will receive a maximum mark of the pass mark (40%);
   - more than two weeks after the deadline will not be marked.

3. Extensions are only granted for valid reasons (see Course/Field guide). Concrete evidence (e.g. medical certificate) will normally be required by the Year Tutor. If you want an extension of the deadline date, you must:

   - get a copy of the form for late submission from the School Office;
   - fill in Part A of the form, giving reasons why you cannot meet the existing deadline date;
   - supply the Year tutor with relevant documentary evidence;
   - ask the Year Tutor to fill in Part B – the decision whether to agree the request rests with the Year Tutor, NOT WITH THE UNIT COORDINATOR;
   - attach the form to the front of your coursework when you submit it (keep a copy for your records).
   - each extension form is only valid for one piece of coursework.

   The maximum extension is two weeks.

The Faculty Office is at times very busy, especially when course work is due to be submitted or handed back. Staff in the office do their best to give support and answer individual student requests. In return, it is expected that students exercise patience and behave courteously whilst waiting at the counter.

In all social exchanges in the classroom and in the university as a whole, students and staff are expected to follow the guidelines of acceptable behaviour as outlined in the University Equal Opportunities Document. A copy of this document is available for reference in the Faculty office and the Student Handbook contains a summary of its core principles.

6. FEEDBACK

Your Coursework will normally be returned within 20 working days of the submission date. Feedback will be provided on a practical work feedback sheet which covers the various components of the practical report. Comments on this sheet will enable you to identify the strengths and weaknesses of your work.

The results of the examination will be available within 20 working days of the end of the examination. Feedback will be provided on the basis of the cohort and not individuals.

6. INTRODUCTION TO STUDYING THE UNIT

Overview of Main Content. This unit builds on knowledge and skills acquired in Research Methods 1 and Research Methods 2. The emphasis will be on experimental and correlational research methods and you will learn how to design, execute, analyse and report more sophisticated studies than you did at level 1. There will be an emphasis on practical work and on learning how to carry out statistical tests using SPSS and on interpreting the results of these tests. What you learn in this unit is vital for your Final Year Project and is also important for an understanding of other units.It is very important that you attend both seminars and lectures, particularly as the former involve learning and practising the use of SPSS.

Overview of Types of Classes. The unit involves weekly lectures and workshops. The purpose of lectures is to provide the conceptual structure of a topic. You will be expected to “flesh out” this conceptual structure with your own reading. The purpose of the workshops is to build on the content of lectures with practical work and by carrying out and interpreting the results of various statistical tests. A portion of the lectures and workshops will be devoted to helping you carry out a small experiment that you will design, execute, analyse and write up. This is an opportunity to put the different skills you will have learned together.

Importance of Student Self-Managed Learning Time. Perhaps more than any other component of a psychology degree, research methods is dependent on you consolidating what you learn in lectures and workshops. You can do this in several ways, most commonly by reading original articles which report empirical work and even by making sure you understand the purpose, design and results of experiments reported in the literature. In addition you will need to devote a significant amount of time to carrying out the practical work that is the basis of the coursework

assessment. While we provide an outline of what you should do it is up to you to develop this into a carefully controlled and meaningful piece of work.

Employability. A knowledge of research methods and statistics, and the ability to apply this knowledge, is absolutely crucial to future employment in a psychology or psychology related profession. The majority of these professions inevitably rely on the professional's ability to investigate, or at least interpret the results of an investigation, of a given phenomenon and then evaluate and presents this evaluation to his/her peers.

7. THE PROGRAMME OF TEACHING LEARNING AND ASSESSMENT

Indicative Content:

- The Experimental Method – basic principles and designs.
  - Analysis of Variance (ANOVA): single factor, independent groups and multiple comparisons
  - ANOVA: single factor, related groups and multiple comparisons
  - ANOVA: two factor and more complex designs
- The Correlational Method – basic principles and design
  - Correlation & simple regression
  - Partial correlation and multiple regression
  - Questionnaire Desgn
- Single Case Studies

WEEK	LECTURE (1-2)	WORKSHOP (2-5)
1	**A. The Experimental Method**	Designing experiments and identifying problems
2	Single factor indep groups expts: One way unrelated ANOVA & multiple comparisons.	SPSS analysis: ANOVA one way, unrelated & multiple comparisons.
3	Single factor related groups: one way related ANOVA and multiple comparisons.	SPSS analysis: ANOVA one-way related & multiple comparisons.
4	Two factor unrelated expts: experimental design	Experimental design of a two factor unrelated experiment
5	Two factor unrelated expts: Two way unrelated ANOVA	SPSS analysis: two way unrelated ANOVAs SPSS analysis of experimental results.
6	Assessment preparation. No lecture	Assessment preparation Data analysis with help available
7	**B. Correlational Methods**	Designing surveys and identifying problems
8	Correlation and simple regression	SPSS analysis: correlation & simple regression
9	Partial correlation and multiple regression	SPSS analysis: partial correlation & multiple regression
10	Questionnaire design	Designing a questionnaire
11	**C. Single Case Methods**	Analysis of single case studies
12	Tutorials as requested	Tutorials as requested

9. LECTURE PROGRAMME

TOPIC 1
Overview of Research Methods
The Experimental Method

Lecture

Aim.
The aim of the lecture is to review the major research methods and then describe the key characteristics of experimental and quasi-experimental methods.

Synopsis.
The lecture will outline major research methods used in psychological research before describing the relationship between psychological theory, hypotheses generated from theory and the experimental method. It will revise and develop key concepts such as causality, variables and conditions, and explain the importance of controlling extraneous variables. It will describe the major experimental designs and conditions for their use and distinguish between experiments and quasi-experiments, discussing the limitations but frequent use of the latter. It will give a brief overview of the conceptual basis of data analysis from these types of investigation.

Workshop

Aim.
The aim of the workshop is to develop your understanding of the experimental method .

Synopsis.
You will carry out exercises identifying different features of experiments and designing, from first principles, simple experiments.

Learning outcomes:
At the end of the lecture and workshop you should be able to:

- describe the role of experiments in developing psychological theory.
- distinguish experiments from quasi-experiments
- describe key concepts in designing experimental research
- describe the characteristics of major designs
- outline the use of appropriate descriptive and inferential statistics

Core Reading

Howitt, D. & Cramer, D. (2005) Introduction to Research Methods in Psychology. Pearson. Chapters 2 (aims and hypotheses), 7 (basic laboratory experiment) and 8 (advanced experimental design)

Harris, P. (1986) Designing and Reporting Experiments. Part 2: Principles of experimental design.

TOPIC 2
One-way, unrelated Analysis of Variance (ANOVA) & multiple comparisons .

Lecture

Aim.
The aim of the lecture is to describe the design and analysis of studies involving one factor experiments with 3 or more independent groups.

Synopsis.
The lecture will identify the kinds of question requiring the use of three or more independent groups. It will describe the characteristics of the single factor research design and the problems of control. It will consider the kind of data that result from such investigations and the use of the Analysis of Variance to analyse them. The one-way, between subjects, ANOVA will be used to explain the logic of all ANOVAs and the kind of information that SPSS outputs. The lecture will go on to explaining why post hoc comparisons are necessary to compare specific conditions.

Workshop

Aim.
The aim of the seminar is to develop conceptual, statistical and computational expertise in this domain

Synopsis.
Analysing and interpreting examples of data using a 1-way, between subjects ANOVA followed by multiple comparisons. Carrying out a simple experiment using a between subjects design

Learning outcomes
At the end of the lecture and seminar you should be able to:
- describe, statistically, the data from an experiment of 2+ groups
- describe, conceptually, the statistical comparison of 2+ groups
- perform the computations for a 1-way, between subjects ANOVA
- interpret the results of a summary table
- perform multiple comparisons and interpret the results

Core Reading

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition. Pearson. Chapter 19 (variance ratio test), chapter 20 (analysis of variance, one-way unrelated) and chapter 23 (multiple comparisons in ANOVA).

Howitt, D & Cramer, D (2002) Introduction to SPSS in Psychology. Pearson. Chapter 19 (variance ratio test), chapter 20 (analysis of variance, one-way unrelated) and chapter 23 (multiple comparisons in ANOVA).
OR
Kinnear, P.R. & Gray, C.D. (2000) SPSS for Windows made simple. Release 10. Chapter 7 (One way ANOVA, unrelated)

TOPIC 3
One-way related ANOVA & multiple comparisons .

Lecture

Aim.
The aim of the lecture is to describe the design and analysis of studies involving one factor and three or more related groups - i.e. repeated measures.

Synopsis.
The lecture will briefly describe the kinds of research design that results in related data sets e.g. longitudinal and intervention studies. The lecture will then consider the design and analysis of studies with one factor and three or more related groups – the one way, within-subjects design. The sources of variance will be identified and the logic of comparing two of these sources to determine significance explained. Differences from a 1-way, between subjects ANOVA will be highlighted. The use and calculation of post hoc comparisons will be explained.

Workshop

Aim.
The aim of the workshop is to develop conceptual, statistical and computational expertise in this domain.

Synopsis.
Analysing and interpreting examples of data using a 1-way, within-subjects ANOVA (repeated measures) and computing multiple comparisons. Carrying out a simple experiment using a related groups design.

Learning outcomes
At the end of the lecture and workshop you should be able to:

- describe, statistically, the data from an experiment of 2+ groups
- describe, conceptually, the statistical comparison of 2+ groups
- perform the computations for a 1-way, between subjects ANOVA
- interpret the results of a summary table
- compute and interpret the results of multiple comparisons

Core Reading

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition. Pearson.. Chapter 21 (Analysis of variance for correlated scores) and chapter 23 (multiple comparisons in ANOVA).

Howitt, D & Cramer, D (2002) Introduction to SPSS in Psychology. Pearson. Chapter 21 (Analysis of variance for correlated scores) and chapter 23 (multiple comparisons in ANOVA).
OR
Kinnear, P.R. & Gray, C.D. (2000) SPSS for Windows made simple. Release 10. Chapter 9 (One way ANOVA, related)

TOPIC 4
The experimental method - two factor unrelated and similar designs

Lecture

Aim.
The aim of the lecture is to introduce the design of two factor experiments with unrelated groups and designs that build on this.

Synopsis.
The lecture will describe the design structure of two factor experiments with unrelated groups. The principles of this design will be described and the question of interpreting main effects and an interaction addressed. This will lead to a review of the study forming the basis of the assessment experiment. The requirements of the assessment will be reviewed and guidelines for the design, data collection, analysis and report issued.

Workshop

Aim:
The aim of the workshop is to design a two factor experiment with unrelated groups.

Synopsis:
The workshop will be devoted to designing a simple two factor experiment and producing the appropriate test materials. The experiment will be carried out in the week before the next lecture

Learning outcomes
At the end of the lecture and workshop you should be able to:

- Design a simple two factor experiment
- Identify the independent variables and the dependent variable
- Identify some of the pitfalls and confounding factors of experimental design
- Explain the meaning of simple effects and an interaction effect
- Interpret the Describe the relationship between the IVs

Core Reading

Howitt, D. & Cramer, D. (2005) Introduction to Research Methods in Psychology. Pearson. Chapter 8 (advanced experimental designs)

TOPIC 5
The experimental method - two factor unrelated and similar designs

Lecture

Aim.
The aim of the lecture is to describe the design and analysis of studies involving two factors, principally in a between-subjects design but also in a repeated measures and mixed design.

Synopsis.
The lecture will identify research questions and conditions appropriate for the use of two factor experiments involving two levels of each factor in a between groups design. The conceptual basis of the two-way ANOVA and the computational procedures used will be described. The format and interpretation of the summary table will be discussed. The meaning and graphical representation of interaction effects will be discussed. Other multifactor designs and their analysis will be described.

Workshop

Aim.
The aim of the workshop is to develop conceptual, statistical and computational expertise in this domain.

Synopsis.
Analysing and interpreting examples of data using a two-way, between-subjects design. Analysing the results of the experiment carried out prior to the session

Learning outcomes
At the end of the lecture and workshop you should be able to:
- describe, statistically, the data from an experiment of two factors
- describe, conceptually, the statistical comparison of a two factor experiment
- perform the computations for a 2-way, between subjects ANOVA
- interpret the results of a summary table
- describe the structure of other multifactor designs

Core Reading

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition.

Pearson. Chapter 22 (two-way analysis of variance for unrelated scores) and (optional) chapter 24 (More on the Analysis of variance). This latter chapter deals with more complex designs.

Howitt, D & Cramer, D (2002) Introduction to SPSS in Psychology. Pearson. Chapter 22 (two-way analysis of variance for unrelated) and (optional) chapter 24 (analysis of covariance and two-way mixed designs). This latter chapter deals with more complex designs.
OR
Kinnear, P.R. & Gray, C.D. (2000) SPSS for Windows made simple. Release 10. Chapter 8 (between subjects), chapter 9 (within subjects and mixed)

TOPIC 6

This week is set aside for assessment preparation. There will not be a lecture or formal seminars. However tutors will be available to advise students on general aspects of the analysis and report..

TOPIC 7
The Correlational Method

Lecture

Aim.
The aims of the lecture are to identify the conditions in which correlational methods are appropriate; to discuss issues of sampling and the methods used to collect data and to design a simple survey.

Synopsis.
The lecture begins by describing the nature of correlational research and the constraints it imposes on interpretations of causality. It goes on to describe the forms correlational research takes and the instruments its uses. The importance of sampling is discussed.

Workshop

Aims:
The aim of the workshop is to identify the characteristics of correlational methods.

Synopsis:
The workshop will discuss different scenarios in which correlational methods are appropriate and inappropriate. A simple survey will be designed

Learning outcomes
At the end of the lecture you should be able to:

- identify the conditions for the use of correlational research and its limitations
- describe some of the methods used to collect data
- explain why sampling is important
- identify the kinds of analyses used to analyse the data.

Core Reading

Howitt, D. & Cramer, D. (2005) Introduction to Research Methods in Psychology. Pearson. Chapter 9 (cross sectional or correlational research)

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition. Pearson. Chapter 30 (the analysis of a questionnaire/survey project).

TOPIC 8
Correlation & Simple Linear Regression.

Lecture

Aim.
The aim of the lecture is to revise the conceptual and statistical basis of correlation and simple linear regression.

Synopsis.
The lecture will identify the conditions for investigations involving correlation. It will discuss the meaning of a correlational relationship and distinguish it from a causal relationship. It will revise the graphical representation of a relationship between two variables (the scatterplot), the concept of a correlation coefficient and its computation, and the meaning of a significant correlation and its statistical determination. The lecture will then go on to discuss the notion of a predictive relationship between two variables and the description of this relationship by a regression equation. The meaning of a significant regression will be discussed and the various components of the equation identified, interpreted using examples.

Workshop

Aim.
The aim of the workshop is to develop conceptual, statistical and computational expertise in this domain.

Synopsis.
Analyses of data sets involving the use of correlation and simple linear regression. In the second half of the workshop students will do a simple regression on data collected the previous week.

Learning outcomes

At the end of the lecture and workshop you should be able to:

- describe the conceptual basis of correlation and identify its limitations
- calculate a correlation coefficient and compute its significance
- describe the conceptual basis of a simple linear regression
- carry out a simple regression of an appropriate dataset and interpret the results.
- carry out a simple regression of collected data

Core Reading (much overlap)

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition. Pearson. Chapter 7 (correlation coefficients) and chapter 8 (regression).

Howitt, D & Cramer, D (2002) Introduction to SPSS in Psychology. Pearson. Chapter 7 (correlation coefficients) and chapter 8 (regression).
OR
Kinnear, P.R. & Gray, C.D. (2000) SPSS for Windows made simple. Release 10. Chapter 11 (correlation), chapter 12 (regression)

TOPIC 9
Partial Correlation and Multiple Linear Regression

Lecture

Aim.
The aim of the lecture is to introduce the uses computation and interpretation of partial correlations and multiple linear regression

Synopsis.
This lecture will identify the inadequacies of a simple correlational analysis in the face of confounding, multiple correlations. The meaning and computation of partial correlations will be described and the psychometric uses of correlation discussed. The lecture will then go on to identify the inadequacies of a simple linear regression analysis in the face of data involving several confounding predictive factors. Through the use of examples the conceptual basis of multiple linear regression will be introduced. The meaning of the results of a regression analysis will be discussed, with particular attention to the components of a regression equation and the importance of these components for the interpretation of results.

Workshop

Aim.
The aim of the workshop is to develop conceptual, statistical and computational expertise in this domain

Synopsis.
Analyses of data sets involving the use of partial correlations and multiple linear regression. In the second half of the workshop students will analyse the results of collected data using multiple regression.

Learning outcomes
At the end of the lecture and workshop you should be able to:
- describe the conceptual basis of partial correlation
- calculate and interpret a partial correlation coefficient and its statistical significance
- describe the conceptual basis of a multiple linear regression
- carry out a multiple linear regression on an appropriate dataset and interpret the results.

Core Reading (much overlap)

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition. Pearson. Chapter 26 (partial correlation) and chapter 28 (multiple regression and multiple correlation).

Howitt, D & Cramer, D (2002) Introduction to SPSS in Psychology. Pearson. Chapter 26 (partial correlation), chapter 28 (stepwise multiple regression) & chapter 29 (hierarchical multiple regression).
OR
Kinnear, P.R. & Gray, C.D. (2000) SPSS for Windows made simple. Release 10. Chapter 11 (correlation), chapter 12 (regression)

TOPIC 10
Questionnaire Design

Lecture

Aims.
The aim of the lecture is to introduce students to the principles of questionnaire design

Synopsis.
The lecture describes the uses of questionnaires and the principles of constructing appropriate items and response format. The notion of items converging on an underlying dimension is discussed. The criteria for judging the quality of a questionnaire are identified and the notions of discriminating power, reliability and validity discussed at some length.

Workshop

Aims.
The aim of the workshop is to design a simple questionnaire about attitudes.

Synopsis:
Students will design a simple attitude questionnaire using the principles of questionnaire design.

Learning outcomes
At the end of the session you should be able to:

- describe the principles of questionnaire design
- explain how the problems of design can be overcome
- describe statistical checks for reliability and item quality
- design a simple questionnire

Core Reading

Howitt, D. & Cramer, D. (2005) Introduction to Research Methods in Psychology. Pearson. Chapter 12 (psychological tests: use and construction)

TOPIC 11
Single Case Investigations: - assessment and intervention.

Lecture

Aim.
The aim of the lecture is to identify justifications of single case experiments, to describe the major designs and address questions of data presentation and analysis.

Synopsis.
The lecture will identify the uses of single case experimental designs. It will discuss their strengths and weaknesses compared to group investigations and will identify justifications for their use. The assessment of an individual relative to group norms will be discussed. Major time-series designs, and common variations, will be described and the problems of controlling for spurious effects and drawing valid conclusions discussed. Questions of describing the results, making statistical inferences and drawing valid conclusions will be addressed.

Workshop

Aim.
The aim of the workshop is to develop knowledge of single case designs through the application of design and analysis principles.

Synopsis.
Reviewing several case studies to identify the principles of design and analysis.

Learning outcomes
At the end of the lecture and workshop you should be able to:

- describe the justifications for the use of single case experiments

- describe the major designs and the inferences they permit
- design a simple single case study
- demonstrate how to present and analyse the data

Core Reading

Shaughnessy, J.J. & Zechmeister, E.B. (1997) Research Methods in Psychology. Chapter 9. "Single Case Research Designs".
OR
Breakwell, G.M., Hammond, S. & Fife-Schaw, C. (1995) Research Methods in Psychology. Chapter 6 "Single Case Experimental Designs"

TOPIC 12
Tutorials as requested

11. LEARNING RESOURCES

There are many textbooks on research methods, on statistics, and on both research methods and statistics. The same topic is usually covered by many books. This helps because if you don't understand one explanation you can look at several others. It's also a hindrance because very rarely will one book give you everything you want for all the topics of interest.

CORE

Howitt, D. & Cramer, D. (2005) Introduction to Research Methods in Psychology. Pearson. *This covers the research methods we do in the unit except for single case studies, for which there is a separate reading.*

Howitt, D & Cramer, D (2003) An Introduction to Statistics in Psychology. Revised 2nd edition. Pearson. *This is a statistics book with a "cookbook" format. It covers all the statistics you need to know in basic form. Older editions will do the job*

Howitt, D & Cramer, D (2002) Introduction to SPSS in Psychology. Pearson. *This is a companion to the above text, dealing with the use of SPSS to analyse data. Older editions will do the job.*
OR
Kinnear, P.R. & Gray, C.D. (2000) SPSS for Windows Made Simple. Release 10. Psychology Press. *This is very good for SPSS . If you haven't already bought the Howitt & Cramer, buy this.*

OPTIONAL

Breakwell, G.M., Hammond, S. & Fife-Schaw, C. (1997) Research Methods in Psychology. Sage. *This is a principally a research methods text for psychologists, covering a good range of quantitative and qualitative methods. No statistics.*

Harris, P. (1986) Designing and Reporting Experiments. Part 2: "Principles of Experimental Design. Open University Press. *This is very good for an overview of the experimental method and for writing a report.*

Howell, D .C. (1999) Fundamental Statistics For The Behavioural Sciences. 4th edition. ITP. *This is the best statistics book by a long way but it's mathematical so you may have problems with it. It has an excellent CD ROMt. I shall be using it as a reference text and source of examples.*

Robson, C. (1993) Real World Research: A Resource for Social Scientists and Practitioners-Researchers. Blackwell. *This is principally a research methods book, for social scientists generally. It covers some methods particularly well.*

Clark-Carter, D (1997) Doing Quantitative Psychological Research: From Design to Report. Psychology Press. *This covers all aspects of quantitative research methods (the main focus of this unit). It tries to explain statistics without mathematics, and often succeeds but the coverage of some topics is patchy. It is excellent on some topics. I shall refer to it as necessary.*
