Module Specification (Distance Learning)

In collaboration with University of London International Programmes

1. Title:	**Statistical Methods in Epidemiology**
2. Module code:	EPM202
3. Institution:	Faculty of Epidemiology and Population Health London School of Hygiene & Tropical Medicine Keppel Street London WC1E 7HT http://www.lshtm.ac.uk/eph/
4. Module Organisers:	Jim Todd, Jo Haviland
5. Mode of study:	Distance learning
6. Type:	Elective (compulsory for some courses – see Section 18)
7. Duration and dates:	Deadlines if taken as part of a formal award: Application deadline: 30 June each year Registration deadline: 31 August each year Course registration duration: Up to 5 years Course starts: 1 October each year Examination takes place: Usually June each year (date to be confirmed) Deadlines if taken as an individual module (i.e. not registered for formal award): Application deadline: 31 August each year Registration deadline: 30 November each year Registration duration: 2 years Module study starts: 1 October each year Examination takes place: Usually June each year (date to be confirmed)
8. Credit points:	15 credit points will be awarded on successful completion of this module at Masters level (Level 7).
9. Notional Learning Hours (NLH):	The module should take about 150 hours to complete. On average students will divide these learning hours as follows: Directed self-study 70 hours Self-directed learning 30 hours Assessment, review and revision 50 hours.
10. Aim:	This module aims to provide students with the key statistical knowledge and skills needed to analyse and interpret data from the common forms of epidemiological studies.
11. Learning objectives:	On completion of this module students should be able to: • explain the basic statistical measures and concepts underlying the analyses of epidemiological data • be familiar with a comprehensive set of statistical methods suitable for a wide range of epidemiological situations • select appropriate statistical techniques for the analysis of data from epidemiological studies • identify specific issues relevant to case-control and cohort studies • demonstrate an understanding of statistical modelling techniques • investigate confounding and interaction in epidemiological data using both stratified analyses and statistical modelling methods • interpret the results of statistical procedures and draw appropriate conclusions.

12. Content:	Module content is structured around the self-study sessions listed below: SM01 Introduction/Measures of effect SM02 Cohort studies SM03 Survival analysis SM04 Case-control studies SM05 Likelihood SM06 Multivariable analysis SM07 Logistic regression 1 SM08 Logistic regression 2 SM09 Logistic regression 3 SM10 Matched case-control studies SM11 Introduction to Poisson and Cox regression SM12 Strategies of analysis SM13 Summary. In the first half of the module the focus is on issues specific to different types of study. The second half of the module deals with statistical modelling and multivariable analyses. The combined materials will enable students to choose and use the techniques appropriate for estimation and hypothesis testing in selected situations.
13. Learning methods:	Learning is self-directed against a detailed set of learning objectives using the materials provided. The key learning methods are: - Reading and reflecting on CAL (computer-assisted learning) materials which introduce, explain and apply the principles and methods covered in the module. - Reading and reflecting on paper-based materials which support the learning in the CAL sessions. - Completing paper and computer-based practical exercises. - Accessing academic support which is available from the module tutors through the web-based discussion forum in which students are encouraged to participate. - Completing the formative assignment and reflecting on written feedback from module tutors. - Completing the assessed assignment and reflecting on written feedback from module tutors.
14. Study resources provided:	CD-Rom - EPM201/202 EPM202 Statistical Methods in Epidemiology Workbook & Reader. <u>Software</u>: Stata <u>Textbook</u>: Essential Medical Statistics (Kirkwood, Sterne). Registered students have access to the School's online library resources. Students who are taking this as an individual module or as part of the MSc/PG Diploma (CF) PH course will also have online access to the MSc EP core electronic study materials (this access will exclude tutor support and associated textbooks).

15. Assessment procedures:	Formal assessment of the module will consist of one Assessed Assignment (comprising 30% of the total grade for the module). Students are also assessed by a two-hour written examination (70% of the total grade for the module). Examinations are normally held in a student's country of residence, in one of over 650 examination centres worldwide. They are arranged mainly through Ministries of Education or the British Council. A local fee will be payable. A list of examination centres can be found at http://www.londoninternational.ac.uk/current_students/general_resources/exams/exam_centres/index.shtml. If students fail an examination at the first entry they will be allowed one further attempt, the following year.
16. Prerequisites:	Students should have completed EPM101, EPM102, EPM103 and EPM105 (core modules) or have equivalent experience. MSc Public Health students, and PG Diploma Public Health students following the credit framework structure, who wish to take this module are required to have obtained a pass grade in the PHM102 Basic Statistics for Public Health core module: a grade of at least 4 is recommended. In particular, for adequate preparation, students should have studied the optional PHM102 CD-ROM session 14 and carried out all the Stata exercises in PHM102. Those wishing to study this module must have regular access to the internet to benefit from library facilities, participate in web-based conference discussions and submit assignments. Students must meet the standard of English required to study this course. See http://www.lshtm.ac.uk/prospectus/english.html.
17. Attendance:	No maximum number
18. Selection, if applicable:	This module is available to those registered for the MSc Epidemiology or Public Health courses; alternatively, it can be taken as an Individual Module. It is a compulsory module for those studying for the PG Diploma Epidemiology course under the credit framework scheme, and for those studying the MSc Epidemiology course. It can also be taken by those studying for the PG Diploma Public Health course under the credit framework structure.
19. Fees:	For current schedule of fees see http://www.londoninternational.ac.uk/fees/schedules/lshtm.pdf.
20. Scholarships:	None available
21. External accreditation:	None
22. Application process:	Applications are managed by the University of London International Programmes (website: http://www.londoninternational.ac.uk/).
23. Further enquiries:	Enquiries may be emailed to distance@lshtm.ac.uk.