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| MODULE SPECIFICATION TEMPLATE |

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| MODULE DETAILS | | | | | | | | | | | | | | | | | | | | |
| **Module title** | **Epidemiology** | | | | | | | | | | | | | | | | | | | |
| **Module code** | **MDM12** | | | | | | | | | | | | | | | | | | | |
| **Credit value** | 20 credits | | | | | | | | | | | | | | | | | | | |
| **Level**  Mark the box to the right of the appropriate level with an ‘X’ | Level 4 |  | | Level 5 | | |  | Level 6 | | | |  | | Level 7 | | | X | Level 8 |  | |
| Level 0 (for modules at foundation level) | | | | | | | | | | |  | |  | | | | | | |
| ***Entry criteria for registration on this module*** | | | | | | | | | | | | | | | | | | | | |
| **Pre-requisites**  Specify in terms of module codes or equivalent | Students must be registered on a higher degree programme (M level or higher) or be employed in an area where knowledge of epidemiology is a requirement for achieving their day-to-day activities/research. | | | | | | | | | | | | | | | | | | | |
| **Co-requisite modules**  Specify in terms of module codes or equivalent | N/A | | | | | | | | | | | | | | | | | | | |
| ***Module delivery*** | | | | | | | | | | | | | | | | | | | | |
| **Mode of delivery** | Taught | | X | | Distance | | | |  | | Placement | | | | |  | Online | | |  |
|  | Other | |  | | | | | | | | | | | | | | | | | |
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| **Pattern of delivery** | Weekly | |  | | Block | | | | X | | Other | | | | |  | | | | |
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| **When module is delivered** | Semester 1 | | | |  | Semester 2 | | | | | | | X | | Throughout year | | | | |  |
| Other | |  | | | | | | | | | | | | | | | | | |
| **Brief description of module content and/ or aims**  Overview (max 80 words) | The module promotes the systematic understanding of epidemiological theory and practice as a basic science in public health. It provides fundamental concepts for designing, conducting, analyzing, and evaluating epidemiological studies and health services research. | | | | | | | | | | | | | | | | | | | |
| **Module team/ author/ coordinator(s)** | Dr Priya Paudyal, BSMS (Module Leader)  Prof Jackie Cassel, BSMS  Dr Anjum Memon, BSMS | | | | | | | | | | | | | | | | | | | |
| **School** | BSMS | | | | | | | | | | | | | | | | | | | |
| **Site/ campus where delivered** | Falmer | | | | | | | | | | | | | | | | | | | |
| ***Course(s) for which module is appropriate and status on that course*** | | | | | | | | | | | | | | | | | | | | |
| **Course** | | | | | | | | | | **Status (mandatory/ compulsory/ optional)** | | | | | | | | | | |
| MSc Public Health | | | | | | | | | | Mandatory | | | | | | | | | | |
| MA International Health Promotion | | | | | | | | | | Optional | | | | | | | | | | |
| MRes Medical Research | | | | | | | | | | Optional | | | | | | | | | | |

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| MODULE AIMS, ASSESSMENT AND SUPPORT | | |
| **Aims** | The aim of the module is to:   * provide fundamental concepts and essential analytical methods pertaining to the design, analysis, and interpretation of epidemiological studies and health services research * enhance competence in critically evaluating and communicating research | |
| **Learning outcomes** | Upon successful completion of this module, students should be able to:  ILO1. describe, examine and analyse the role of epidemiology as the basic science of public health in investigating public health and environmental health issues  ILO2. demonstrate systematic understanding of key epidemiological concepts relating to measures of disease frequency and measures of effect  ILO3. systematically describe and critically evaluate the principles of different types of common epidemiological study designs  ILO4. identify and explain possible sources of bias and confounding in epidemiological studies and discuss the strategies to mitigate them    ILO5. describe routine and non-routine public health data sources and apply appropriate measures and tests in the analysis of the data  ILO6. demonstrate comprehensive understanding of the criteria for establishment of screening programmes, and assessment of existing programmes against these (including issues of sensitivity and specificity of tests).  ILO7. critically evaluate the results and interpretations of published epidemiological studies | |
| **Content** | * Introduction to essential epidemiological concepts and principles: including calculation of incidence, prevalence, odds ratio, risk ratio, number needed to treat, attributable fraction, and other measures * Sources of Epidemiological data ( including standardisation) and their use in health care * Epidemiological study designs: cohort, case control, cross-sectional, ecological, and randomised controlled trials (with other experimental designs) * Exploration of historical, current and high-impact epidemiological studies * Bias and confounding * Reliability and validity * Association and causation * Basic statistical concepts used in epidemiology (significance tests, confidence intervals, power, Type 1 and Type 2 error, sample size estimation, the role of chance) * Assessment of current and proposed screening programmes against epidemiological criteria using examples. Discuss sensitivity, specificity and forms of bias common in screening data | |
| **Learning support** | A list of core / recommended reading is available on the virtual learning environment Student Central  **Core List**    Gordis L, 2019. Epidemiology. 6th edition. Philadelphia: Elsevier Saunders  Porta M, 2014. A Dictionary of Epidemiology. 6th Edition. Oxford University Press  Webb P, Bain C, Paige, A 2019. Essential Epidemiology: An introduction for students and Health Professionals. 4th Edition. Cambridge University Press  Bonita R, Beaglehole R, Kjellström T, 2006. Basic epidemiology. 2nd Edition. World Health Organization      **Recommended List**    Bhopal R, 2016. Concepts of epidemiology. Integrating the ideas, theories, principles, and methods of epidemiology. 3rd Edition. Oxford University Press  BMJ. Epidemiology for the Uninitiated. Chapters  <http://www.bmj.com/about-bmj/resources-readers/publications/epidemiology-uninitiated>  Rothman KJ Timothy LL, Sander G,, 2013. Modern epidemiology. 3rd Edition. Lippincott Williams & Wilkins  Szklo M, Nieto FJ, 2018. Epidemiology: beyond the basics. 4th Edition. Burlington, MA: Jones & Bartlett Learning  Woodward M, 2013. [Epidemiology: study design and data analysis](http://brighton.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwdV1LawIxEB5EoRQ86Nbio0X_gDVms80OiAdF8SKt0kt7kclmc9xeevHfN7MPVwSPITAkkGQyj-_7AEL5JqY3b0Jk0QqtU0IyGDprrHcVLKlqoxBdwnHj9yFe7eXPWn02oBJ1TIilMxifyv2MXERleJXJ49bfrNYrm0smUWHibY2SQ7CPI9aZFhXF7_M4R3WF6D8EWlzInsoxUyRWVq_cy7YDTYYcdKGRZgE87MtydwDtIqk2KbBCTxAszHJTS7qeFzOz7MF4u_la76aV5VOZkTmVy5XP0CbuY8_-cryb7cOESAurlUpUYpQWKTpLijB2RP5-GDOA_j1zw_tTI3j0jl4VqYMXaDl_tNPXes__FlN29A). 3rd edition. Boca Raton, Florida: Chapman & Hall/CRC  Yoav BS, Sara TB, Matthew H, 2013. Epidemiology, Evidence-Based Medicine and Public Health: Lecture Notes. 6th Edition. Oxford: Blackwell  Stewart A, 2016. *Basic statistics and epidemiology: a practical guide. 4th edition.* Oxford: Radcliffe Pub.    **Journals**    International Journal of Epidemiology  <http://ije.oxfordjournals.org/content/current>  Journal of Epidemiology & Community Health  <http://jech.bmj.com/>  Journal of Clinical Epidemiology  <http://www.jclinepi.com/>  European Journal of Epidemiology  <http://www.jclinepi.com/>  American Journal of Epidemiology  <http://aje.oxfordjournals.org/>    **Websites**  Centre for disease control and Prevention  <http://www.cdc.gov/>  Health Knowledge. Epidemiology for Practitioners  <http://www.healthknowledge.org.uk/e-learning/epidemiology/practitioners>  Health Knowledge. Epidemiology for Specialists  <http://www.healthknowledge.org.uk/e-learning/epidemiology/specialists>  <http://www.ons.gov.uk/ons/index.html>  Society for Epidemiological Research  <https://epiresearch.org/>  Wold Health Organisation (WHO)  <http://www.who.int/en/> | |
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| ***Teaching and learning activities*** | | |
| **Details of teaching and learning activities** | Teaching methods will encompass   * Lectures * Group discussion * Workshops * Student presentations * Audio-visual and e-learning * Student debate * Small group investigative tasks * Individual tutorials * Self-directed learning * Problem solving exercises   Staff will provide direction within the lectures and seminars with much learner autonomy evident in the group work and student presentations.  Learning will be supported further by the use of prepared notes and all usual visual and IT aids.  Students will be expected to support their learning by the use and critical appraisal of primary sources of information such as refereed research articles, important sources being made available on Student Central. | |
| **Allocation of study hours (indicative)**  Where 10 credits = 100 learning hours | | **Study hours** |
| **SCHEDULED** | This is an indication of the number of hours students can expect to spend in scheduled teaching activities including lectures, seminars, tutorials, project supervision, demonstrations, practical classes and workshops, supervised time in workshop/studios, fieldwork, and external visits | **35** |
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| **GUIDED INDEPENDENT STUDY** | All students are expected to undertake guided independent study which includes wider reading/practice, follow-up work, the completion of assessment tasks, and revisions. | **165** |
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| **PLACEMENT** | The placement is a specific type of learning away from the university. It includes work-based learning and study that occurs overseas. | N/A |
| **TOTAL STUDY HOURS** | | **200** |
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| ***Assessment tasks*** | | |
| **Details of assessment on this module** | **Exam**  A 90 minutes unseen written exam.  **Poster Presentation**  Students will prepare a poster and will orally present the content of their posters to two assessors for 10 minutes, and then answer questions for up to 5 minutes. The final mark will be based on a combination of assessors’ impressions and on the evaluation of the poster content.  Both components must normally be passed; compensation from one component to the other is not normally allowed | |
| **Types of assessment task[[1]](#footnote-1)**  Indicative list of summative assessment tasks which lead to the award of credit or which are required for progression. | | **% weighting**  (or indicate if component is pass/fail) |
| **WRITTEN** | A 90 minutes unseen written exam | 70% |
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| **COURSEWORK** |  |  |
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| **PRACTICAL** | Poster Presentation | 30% |
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| EXAMINATION INFORMATION | | | | |
| **Area examination board** | PG Exam Board BSMS | | | |
| Refer to University for guidance in completing the following sections | | | | |
| ***External examiners*** | | | | |
| **Name** | | **Position and institution** | **Date appointed** | **Date tenure ends** |
| Dr Lindsay Forbes | | Senior Clinical Research Fellow, Centre for Health Services Studies, University of Kent | September 2018 | September 2022 |

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| QUALITY ASSURANCE | | | | | |
| **Date of first approval**  Only complete where this is not the first version | 2000 | | | | |
| **Date of last revision**  Only complete where this is not the first version | June 2015 | | | | |
| **Date of approval for this version** | Dec 2015 | | | | |
| **Version number** | 8 | | | | |
| **Modules replaced**  Specify codes of modules for which this is a replacement |  | | | | |
| **Available as free-standing module?** | | Yes | X | No |  |

1. Set exercises, which assess the application of knowledge or analytical, problem-solving or evaluative skills, are included under the type of assessment most appropriate to the particular task. [↑](#footnote-ref-1)