# Module Specification

## GENERAL INFORMATION

<table>
<thead>
<tr>
<th><strong>Module name</strong></th>
<th>Demographic Analysis: Further Methods and Models</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module code</strong></td>
<td>DEM202</td>
</tr>
<tr>
<td><strong>Module Organiser(s)</strong></td>
<td>Georges Reniers, Kazuyo Machiyama</td>
</tr>
<tr>
<td><strong>Contact email</strong></td>
<td>The LSHTM distance learning programmes and modules are run in collaboration with the University of London (UoL). Enquiries may be made via their Student Advice Centre at: general <a href="https://london.ac.uk/contact-us">https://london.ac.uk/contact-us</a> email-form click <a href="https://london.ac.uk/contact-us">here</a> (Enquiries from face-to-face i.e. London-based LSHTM MSc or research students regarding study of DL modules should be emailed to <a href="mailto:DEMsupport@lshtm.ac.uk">DEMsupport@lshtm.ac.uk</a>)</td>
</tr>
<tr>
<td><strong>Home Faculty</strong></td>
<td>Faculty of Epidemiology &amp; Population Health London School of Hygiene and Tropical Medicine <a href="http://www.lshtm.ac.uk/eph/">http://www.lshtm.ac.uk/eph/</a></td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>This module is at Level 7 (postgraduate Masters 'M' level) of the QAA <a href="https://www.qaa.ac.uk/subject-profiling/framework">Framework for Higher Education Qualifications</a> in England, Wales &amp; Northern Ireland (FHEQ).</td>
</tr>
<tr>
<td><strong>Credit</strong></td>
<td>LSHTM award 15 credits on successful completion of this module.</td>
</tr>
<tr>
<td><strong>Accreditation</strong></td>
<td>Not currently accredited by any other body.</td>
</tr>
<tr>
<td><strong>Keywords</strong></td>
<td>Demography; quantitative methods; life tables; population dynamics; fertility.</td>
</tr>
</tbody>
</table>

## AIMS, OBJECTIVES AND AUDIENCE

### Overall aim

This module provides technical training in advanced methods of demographic analysis, including the use of model life tables, population dynamics and projections, and advanced fertility analysis. The techniques and concepts taught in this module build in complexity on the methods taught in DEM 101; most sessions contain a large amount of mathematical material.

### Intended learning outcomes

By the end of this module, students should be able to:

- Define and interpret the main measures of fertility, mortality, migration and age structure
- Describe and assess typical age patterns of fertility, mortality and migration and explain the models commonly used to represent them
- Evaluate and explain the interactions between the components of population change and the age structure of the population
- Explain the concept of population momentum
- Apply several estimation methods derived from the demographic theories studied
- Construct national-level population projections using computer packages
- Review the main approaches used to forecast fertility, mortality and migration.

**Target audience**

*Demographic Analysis: Further Methods and Models* is a compulsory module for all students on the DL PG Diploma/MSc Demography and Health programmes.

**CONTENT**

**Session content**

The module will include sessions addressing the following topics:

- Session 1 Demographic models: life tables, relational models
- Session 2 Demographic models: mathematical approaches
- Session 3 Demographic models: fertility
- Session 4 Population projections (II): uses and accuracy of forecasts
- Session 5 Population projections (III): sub-national projections and forecasting vital rates
- Session 6 Advanced fertility analysis: reproductivity
- Session 7 Demographic models: stable population models
- Session 8 Population dynamics and momentum
- Session 9 Models of populations with variable growth rates.

**TEACHING, LEARNING AND ASSESSMENT**

**Study resources provided or required**

The following materials are provided to students after registration for this module when the online learning site, Moodle, opens in October:

- A brief guide to studying the module.
- The main learning materials (sessions listed above, provided on Moodle).
- A reading list including details of both required and optional reading and links to selected papers.
- A list of useful websites.

The School's Moodle site allows students to access a range of materials, including those listed above; participate in module-specific discussion forums and Collaborate sessions, and access the LSHTM online library resources.

**Teaching and 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 the CAL (computer-assisted learning) materials which introduce, explain and apply the principles and methods covered in the module.
- Reading and reflecting on provided materials which support the learning in the CAL sessions. This may include making use of the LSHTM online library resources.
- Accessing academic support which is available from the module tutors through the web-based discussion forums and real-time sessions (using Collaborate Ultra) in which students are encouraged to participate.
- Completing formative assignment(s) and reflecting on written feedback from module tutors.

**Assessment details**

Formal assessment of this module includes an assessed assignment (30%) and an unseen written examination (70%) with 15 minutes reading/planning time. If students fail the module overall, they are allowed one further attempt at the failed element (assignment or examination).
| **Assessment dates** | Assignments for this module can be submitted only once annually, no later than 31 March and must be submitted via the online Assignment Management System. Unseen written examinations for DL modules are held once a year, in June (including resits). Examinations are normally taken in a student's country of residence, in one of over 650 examination centres worldwide (arranged mainly through Ministries of Education or the British Council). A list of examination centres can be found at [https://london.ac.uk/current-students/examinations/examination-centres](https://london.ac.uk/current-students/examinations/examination-centres). A local fee will be payable direct to the examination centre. This fee is in addition to the programme/module fee and is set by, and paid directly to, the individual examination centres. The level of local examination centre fees varies across the world and neither the University of London nor the LSHTM have any control over the fee amount. For students who are required to re-sit, or granted a deferral or new attempt at the written examination, the next examination date will normally be the following June. |
| **Language of study and assessment** | English (please see 'English language requirements' below regarding the standard required for entry). |
| **TIMING AND MODE OF STUDY** | |
| **Duration** | Students may start their studies once they have access to Moodle (usually from 1 October) and work through the material until the start of the June examinations (although assessment submission deadlines which are earlier than this must be observed). Students registering after September should note that introductory messages, and some online activities (for example Moodle discussions and/or real-time welcome sessions) may have already taken place before they get access to Moodle. All such messages and recordings (where applicable) will be available to access throughout the study year. |
| **Dates** | Tutorial support for this module is available from the beginning of October through to the examination in June. |
| **Mode of study** | By distance learning |
| **Learning time** | The notional learning time for the module totals 150 hours, consisting of:  
- **Directed self-study** (reading and working through the provided module material) ≈ 80 hours  
- **Self-directed learning** (general reading around the subject, library, Moodle discussion forums) ≈ 30 hours  
- **Assessment, review and revision** ≈ 40 hours. |
### APPLICATION, ADMISSION AND FEES

<table>
<thead>
<tr>
<th><strong>Pre-requisites</strong></th>
<th>Those wishing to study this module must have already studied DEM101 Introduction to Demographic Analysis and EPM102 Statistics with Computing prior to studying this module. They must also have regular access to the internet to access the module study materials, participate in module-specific discussions on Moodle, benefit from online library facilities and submit assignments.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English language requirements</strong></td>
<td>A strong command of the English language is necessary to benefit from studying the module. Applicants whose first language is not English or whose prior university studies have not been conducted wholly in English must fulfil LSHTM’s English language requirements, with an acceptable score in an approved test taken in the two years prior to entry. Applicants may be asked to take a test even if the standard conditions have been met.</td>
</tr>
<tr>
<td><strong>Student numbers</strong></td>
<td>This is a new module. The number of students actively studying this module is expected to be 5-10 students in the first year.</td>
</tr>
<tr>
<td><strong>Student selection</strong></td>
<td>This module is compulsory for students registered on the DL PG Diploma/MSc Demography and Health programmes. This module is also open to LSHTM research degree students via the mixed mode study option.</td>
</tr>
<tr>
<td><strong>Fees</strong></td>
<td>The current schedule of fees can be viewed at <a href="https://www.lshtm.ac.uk/study/fees-funding/tuition-fees/tuition-fees-and-expenses-2018-19">https://www.lshtm.ac.uk/study/fees-funding/tuition-fees/tuition-fees-and-expenses-2018-19</a></td>
</tr>
<tr>
<td><strong>Scholarships</strong></td>
<td>Scholarships are not available for individual modules. Some potential sources of funding are detailed on the LSHTM website.</td>
</tr>
<tr>
<td><strong>Admission deadlines</strong></td>
<td>Applications for LSHTM distance learning programmes and modules are managed by the University of London. To apply to take either a formal award (i.e. PG Certificate, PG Diploma or MSc) or an individual module, click on the red Apply Now tab <a href="https://london.ac.uk/courses/demography-and-health">https://london.ac.uk/courses/demography-and-health</a></td>
</tr>
</tbody>
</table>

Key deadlines are as follows:
- Application deadline: 31st August each year
- Registration deadline: 30 September each year

(In-house LSHTM research students wishing to study this module should note information given in the mixed mode study option links for DrPH/research degree students at http://intra.lshtm.ac.uk/edu/researchdegrees/rdsupportframework/profdev/rd_mixedmodeinformation.pdf)

### ABOUT THIS DOCUMENT

This module specification applies for the academic year 2018/19

Last revised/approved 29/05/2018 by Lynda Clarke

London School of Hygiene & Tropical Medicine, Keppel St., London WC1E 7HT. www.lshtm.ac.uk