

Project proposal

<i>Project title</i>	Statistical Modelling of Demographic and Public Health Trends and Changes in 19th and 20th Century Britain
<i>First Supervisor</i>	Dr <input type="text" value="Gordon Hunter"/>
<i>Second Supervisor</i>	Dr Rosie McNiece
<i>School</i>	Mathematics
<i>Other member of supervisory team (no more than three KU supervisors in total)</i>	<input type="text"/>
<i>Specific requirements beyond 2:1 degree</i>	<input type="text"/>

**Project summary
(max 4,000 characters)**

MSc by Research

Over recent years, a large amount of data from sources such as census returns (every ten years, for 1841 - 1911), Borough and Parish records, and admissions to various hospitals (e.g. Historic Hospital Admission Records Project, <http://hharp.org/>) has become freely available in digital format. This can provide an invaluable resource for statistical investigations concerning periodic changes and trends in demography and health, an area of increasing interest at a national and international level ('Population Ageing in the United Kingdom, its constituent countries and the European Union' March 2012, ONS, 'A demographic portrait of Northern Ireland' Population Trends, Spring 2009, ONS). The proposed project, within the Longitudinal Statistics (LStat) research group in the School of Mathematics, will utilise advanced statistical methodologies in areas such as Generalised Linear Modelling, Bayesian Analysis and Information Theory to investigate patterns in birth, marriage, mortality and survival data from some of these sources. An initial study should provide sufficient material for an MSc by Research thesis. Further development of this work in line with current research questions in the fields of demography, health and epidemiology would lead to a viable and nationally topical PhD project.