Data Science Distance Learning Programme
Briefing document for School of Informatics Board of Studies

This document provides context for a set of three proposals for distance learning courses to School of Informatics Board of Studies. These are part of a broader programme in distance learning discussed at earlier meetings and now being pursued more broadly.

Background
Data intensive research is pervasive across academia and industry. Its influence is felt in different ways and at different scales so there will be a sustained demand for education from introductory courses through to specialized courses (where specialization may be in technology/theory or application domain). This will lead to a complex and changing landscape for education involving data; one in which we will need to be agile in provision and our prospective students will demand choice in the quantity, level and style of provision. This will vary widely across traditional disciplines and may promote strong interactions between domains as new research areas develop. Our aim is to provide a simple, robust, adaptive framework within which to offer a wide range of courses drawn from across the University. We believe that a demonstration of excellence in data science across a wide range of fields will be a principal attraction of Edinburgh for students.

What will we offer?
We anticipate a variety of forms of engagement:
- individual CPD and PPD courses
- small (60pt) groups for PG certificate
- larger (120pt) Diplomas
- full MSc (with project, or possibly with further courses)

Development of this suite of new educational offerings has been pump-primed by an investment of £180k from the University’s Distance Education Initiative.

Timeline
The diagram below shows the timeline for development of the programme. Courses that map to data science programmes are currently being developed. The portfolio of relevant educational materials will include:
• Introductory technology courses (Introduction to Data Science, Data Analytics, Data Architectures, Data Visualisation and Human Factors, Introduction to Vision and Robotics, Policy and Ethics) contributed by Schools of Informatics and Physics and from CHSS.
• More specialized technology courses (Advanced Vision, High Performance Computing) contributed by Schools of Informatics and Physics.
• Courses that deepen understanding of domains (Medical Informatics, Public Health Informatics) contributed by other Schools and Colleges (e.g. CMVM).
• We are also, as part of the startup phase, co-producing some of the hands-on data processing examples with a local company (Aridhia).
In parallel with course development we are putting in place the support structure needed to run a cross-University distance learning programme. A full-time administrative manager is in place (supported by our Distance Education Initiative funding). The aim is to offer an initial set of courses in September 2015 (the ones in the “first tranche” of the diagram above, perhaps substituting an “applied project” course for the “ethics and standards” course). Advertisement of these would be from April 2015. If this goes well, then we will proceed to offer enough courses (and project provision) for a full MSc in the following academic year (starting September 2016).