1. Job Details
Job Title: Senior Database Developer
Line Manager: School IT Services Manager

2. Job Purpose
Design, develop and maintain corporate databases in line with School policy for the School’s teaching, research and technical support organisations. To foster good practice and interact with College and University corporate data and e-learning services.

3. Main Responsibilities
1. Design and maintenance (adapting to evolving policies) of the core Engineering and Electronics Teaching Organisation (EETO) database and related Exams database. Provide "matching" between Registry facilities and School requirements and vice versa. 40%
2. Ditto for the School research database which has been designed to track research grants, staff, postgraduates and record outputs, e.g. metrics for the RAE publications etc (see examples below). 30%
3. Evaluating school implementations for e-learning (increasing role). 10%

4. Planning and Organising
Postholder required to be self-organising wrt to job prioritisation, blending event driven and development work. Long term service test and development in consultation with colleagues around the University and externally, e.g. EUCLID project.

5. Problem Solving
A high level of ability in analysis and support skills appropriate to computer systems problems.
Example: Course Accreditation by Professional Institutions: Resolving a 50 page/course external accreditation questionnaire into a collation of learning outcomes across various programmes of study, including tools that allowed a designated staff member to review progress and chase other contributors. Final version gained praise from the accreditation body (IEE).

6. Decision Making
The maintenance and development of new services requires decisions in respect of changes which will affect all users of these services. For example when to apply patches, when to introduce a complete change to a core service, e.g. migrating delivery to be via "MyEd". There is an expectation to take decisions unaided and make recommendations with a view to improving existing services and to implement these successfully after appropriate consultation with other service providers.
Example: the design of a secure and resilient database for examination mark processing, in terms of both the hardware, software, backup and database design.

7. Key Contacts/Relationships
Internally, customers are primarily the administration and academic staff. Advice to Directors of Teaching and Research, Technical Services Manager and the School’s Information System Officer wrt potential applications and developments to assist the School’s business processes.
Serve on various working groups and committees with other database and e-learning staff in the College and University, e.g. CSE-SMART project steering committee and CSE e-learning group. MyEd User (developers) Forum.
The postholder’s work has been "cloned" to setup a research database for HSS, and a postgraduate database in Biology. The work with HSS included developing filters for import of existing data where technically practical. The postholder’s work has impacted the design of the Library’s publication database and the MIS: "RAE data improvement" project.
8. Knowledge, Skills and Experience Needed for the Job

The job is of a very technical nature normally requiring graduate level education, a high level of hands on skill and a minimum of five years experience with a range of both databases and computer systems. The ability to solve problems in a timely and effective manner is essential along with technical documentation skills.

9. Dimensions

The School has 1200 undergraduate and taught MSc students, 400 research students and staff, altogether 2100 registered user accounts. Database services are offered on-line to all these.

The schools Teaching and Research Database integrated system has 250 tables containing c100MB of data. The main areas of functionality are:

- Phonebook - staff, specialities, qualification/professional memberships, areas of research and physical locations, (available to all enquirers).
- Buildings - room / key / phone number / occupancy tracking
- Research - tracks progress with publications, grants, esteem, knowledge transfer, supervision and research funding, including involvement of external (non-SEE) collaborators
- Postgrad - tracks research PG applications (10-60/month) and progress through the school
- Technician - job tracking (includes financial elements) (5-50/month) and equipment logs
- Teaching - handles 197 SEE UG and taught PG courses. Tracks demonstrators, timetabling (including labs and tutorials), submission, attendance and coursework, with VLE elements to ensure a raised lowest common denominator of e-Learning support
- Examination - handles 197 SEE UG and taught PG courses, as well as external courses as required. Reports to 6 examiners (5 disciplines + taught PG) meetings. This runs on a discrete secure network with numerous levels of redundancy. The database comprises 5 major components, data for 3 of which are imported from the teaching database and 2 of which are unique to the secure examination database.

Other databases:

- UCAS - tracks applicants, open days, customises correspondence. Used by 4 schools in the College.
- Accreditation database: used to map learning outcomes of courses to degree structure. Presented to 3 professional Institutions; commended by the IEE and suggested for further development.
- Cross-college database to record areas of expertise and unusual items inventory for technical services across the college.

10. Job Context

The post requires a wide ranging knowledge across a number of core services. The job is technically complex and challenging, as the technology, and hence the service requirements of our researchers in particular, are constantly evolving before any support infrastructure is available from the University. Issues arise often that have not been encountered before and the IT team is always at the leading edge, frequently advising EUCS on such matters.

In order to ensure continuity of service, especially for taught laboratories for which rescheduling is virtually impossible, we have to develop back up for those central services that we normally rely on. Where practical, these are hot-swap, but inevitably many require on-the-fly manual reconfiguration.

11. Verification

I agree that this job description conveys an accurate description of the job.

Job Title Name signature date