

**Engineering Centre for Excellence in Teaching and Learning (engCETL)**  
**Faculty of Engineering, Loughborough University**  
**Interim Self-Evaluation Report**  
**July 2007**

## **1.0 Executive Summary**

engCETL was established in 2005 and is building on the excellent engineering provision at Loughborough and long-standing collaboration with industry. engCETL aims, through comprehensive, wide-ranging and inter-related activities, to extend the processes through which industry makes an input into student learning, making them more sustainable and transferable. To this end, engCETL staff work with engineering related academics, students and other staff in all five departments of the Faculty of Engineering, plus one department from each of the Faculty of Science and the Faculty of Social Sciences and Humanities.

This interim self-evaluation has a formative emphasis, a common purpose shared with HEFCE's programme-wide evaluation, being embedded into its operational plans and development activities from the outset. The Centre developed and used operational and strategic plans as a formal means to collect data in order to focus on the impact of CETL activities on three key stakeholder groups – industry, students and academics. The evaluation strategy is divided into two distinct but inter-related parts: an internal evaluation based upon the accumulation of data concerning the CETLs activities over the first two years; and three commissioned external evaluations (the experiences of seconded academics; the new engCETL Learning Environment; and the engCETL Development Projects).

The first two years of engCETL operation has focused on the following integrated activity strands:

**Industry Interaction:** During its first two years, engCETL has initiated the development of models that will provide a framework to ensure that industry input into student learning is sustainable through staffing and company changes. Awareness has been raised in each of the seven engCETL departments with regard to the following: facilities and support offered for widening contacts with industry and creating more permanent and formal mechanisms for the recruitment of industrial partners, the industrial placement of students, setting relevant industry-based projects, and consultation on issues to do with maintaining curricula which are relevant to the needs of industry and the potential employers of Loughborough graduates. Externally, awareness has been raised in a wide range of engineering and related companies (144 to date) in the benefits of collaboration with University departments on student placements, design projects and curriculum design. The mechanisms are now in place to enable CETL and department staff to carry this activity forward in years 3 to 5 and beyond. Currently input from engCETL is helping develop the University strategy on employer engagement as defined by the Leitch Report.

**Departmental Engagement:** The involvement of seconded academics with the engCETL has been highly successful in its first two years, having significant impact on the associated departments. As a result, all engCETL departments (and a number of others) have successfully engaged with the CETL.

**Support Services and Resource Development:** Since its inception, the Centre has successfully managed to maintain the support service offered from the previous Engineering Education Centre. Resources developed or enhanced during the first two years have impacted upon the teaching and learning of large numbers of students and academic and related staff. engCETL staff are in a unique position to have University-wide impact by providing continuity of support and guidance.

**Pedagogic Research:** engCETL achievements in pedagogic research have added a new dimension to the research profile of the Engineering Faculty. All research projects align with engCETL aims and objectives, and are intended to provide an evidence base, demonstrate excellence, and grow the capacity to conduct pedagogic research. There are now 2 Research Associates and 4 Research Students based in the CETL. Working with the Engineering Subject Centre, successful national pedagogic research workshops have been organised for engineering academics.

**Transfer of Practice:** Significant developments, between engCETL departments, have begun to address a key aim of enabling the transfer of practice between departments.

**Institutional Integration:** The CETL's Mission, Aims and Objectives remain aligned to, and are now integrated with, Loughborough University's Strategic Plan and Learning and Teaching Strategy. The University sees its two CETLs as being an essential part of its emerging policy to establish a Centre for Learning and Teaching, an HR strategy recognising and valuing excellence in learning and

teaching, and a single route to promotion for academic staff. Furthermore, engCETL is well placed to integrate with and/or influence University policy and strategy, both through institutional membership of the engCETL Advisory Board and through engCETL staff membership on key University committees.

**Reward, Recognition and Developing Staff:** The integration of engCETL award mechanisms with those of the University, disseminating relevant activity beyond engCETL departments and contributing to the University strategy for teaching and learning has enabled fast progress towards engCETL aims for reward and recognition. Significant time has also been spent developing both new and existing staff to enable them to best address the needs of the CETL.

**Student Engagement, Satisfaction and Employability:** An impressive range of different strategies have been implemented for student engagement. These have included student focus groups, student design competitions, student visits to other CETLs, student representation on our Advisory Board, and students employed in the Centre over the summer months, - all providing a basis for future years.

**Marketing:** The engCETL core staff have developed and produced a range of marketing tools and other resources that form the backbone of the new service offered. A series of formal workshops, some in collaboration with the Engineering Subject Centre, have attracted much interest, giving a clear indication of impact and future potential. Coupled with the development of newly commissioned resources, engCETL is well placed to proceed to year 3 and beyond.

**Sustainability and Sourcing Further Income:** Significant developments have begun to enable the achievement of the long term aim to be a sustainable centre. Over half of the 18 staff based in the engCETL are funded externally to the CETL.

**Wider Dissemination:** engCETL staff are well placed for wider dissemination through membership of a variety of external organisations and committees and excellent links with the Engineering Subject Centre. Activities have included national and international collaborations, conference presentations, workshops, visits, visitors and research groups.

**New engCETL Building:** A clear achievement in year 1 was the new engCETL building. In year 2 the space was made available to all engCETL departments for the teaching of engineering design, the rest of the time being made available for individual staff and student bookings. This has led to a high occupancy rate during term time, impacting on staff and students from all engCETL departments. The key issues for adjustment and future development have been identified by ongoing reflection and through the external evaluation reports and include:

**Future developments identified from the Evaluation of Seconded Academics' Experiences:**

engCETL staff and Seconded Academics will continue to build collaborative working relationships and will identify new ways of sharing knowledge and skills. Seconded academics will continue to act as change agents, using insider knowledge of their departments to disseminate information and champion ideas and to provide ongoing input into the formulation of engCETL policy and decision making.

**Future developments identified from the Evaluation of Projects (interim report) include:**

Engaging greater numbers of academics with the CETL through the project process; improving the implementation of the Centre's development projects; increasing the interactions between academics and engCETL staff implementing successful project bids; adoption of action research methodology to enable the systematic pilot testing of products; and re-visiting past projects for maximum impact.

**Future developments identified from the Learning Space Evaluation (interim report) include:**

Providing improved guidance, training and booking facilities to encourage increased staff and student usage of learning space and resources; exploring new opportunities for the use of the CETL learning and teaching space; viewing the space as an agent of change which can be used to encourage dissemination and publication; producing case studies of good practice; and pilot extended opening.

**Other future developments identified in this report include:**

Continue to target key recommendations in the Roberts, Cox and Leitch Reviews; commissioning further evaluations as required in line with core engCETL aims and activities; regular maintenance of newly established contacts with industry; strategically focusing project developments; successful negotiation of at least one further, part-funded, PhD studentship; continued work with the Pro-Vice Chancellor for Enterprise to develop enterprise education in the engineering curriculum; continued analysis of the teaching of engineering design projects across engCETL departments to transfer practice; enhancing engagement of students in engCETL activities; working closely with the Higher Education Academy Engineering Subject Centre to maximise national dissemination; and to continue seeking external funding streams to achieve sustainability.