1. Project objectives, perceived benefits of project work and rationale for this research activity (max 200 words)

**Aim**
The aim of the project is to develop a system which will promote a solid knowledge of programmes “core competencies” amongst students. This will be achieved by building a set of online quizzes which students will undertake on a regular basis throughout the delivery of programme modules. Quizzes will include feedback with links to web-based activities/information to help students develop their understanding.

**Rationale**
During delivery of a module a lecturer typically builds upon fundamental/core knowledge that students have gained through previous studies. A lecturer often assumes that this set of core competencies are deeply ingrained in the students and may not spend any significant amount of time reviewing such material. However, students may not have sufficiently digested these core competencies to an extent that they can readily and easily relate them to new areas.

**Benefits**
The following outlines the perceived benefits of the project:
- Promote understanding of core competencies
- Development of E-learning expertise
- Re-use of quizzes across programmes
- Promote vertical coherence within programmes
- Efficient feedback
- Encourage self-directed learning
2. Work programme
(max 400 words)

Key outcomes
There are two key outcomes associated with this project:
1. Development of a methodology to determine a programmes core competencies.
2. Development of online quizzes to support student understanding of these core competencies and to reinforce these competencies throughout each stage of the programme.

‘Prerequisite’ and ‘Developed’ core competencies
In this project “core competencies” are loosely defined as “fundamental knowledge within a programme upon which a significant amount of additional knowledge is developed”. Examples of ‘core competencies’ within electrical engineering is the need to know Ohm’s Law and how current flows in basic linear circuits; this knowledge is required in order to analyse more sophisticated circuits. This project also differentiates between prerequisite core competencies and developed core competencies. Prerequisite core competencies are those competencies which a lecturer expects each student to have before undertaking a module. Developed core competencies are those competencies developed within a module that students will require during their study of future modules.

Identification of core competencies
While some competencies are somewhat obvious within a specific discipline others are likely to take some effort to identify. A first step to identifying the core competencies will require an analysis of the programmes module descriptors to identify potential core competencies. This will be followed up with interviews with module lecturers to determine both the ‘prerequisite’ and ‘developed’ core competencies within each module.

Supporting understanding of core competencies
Online quizzes have been identified as a suitable mechanism for supporting the development of core competencies for the following reasons:
- Easy/wide access
- Facility to provide quick feedback
- Easy reuse of quizzes
- Allows multiple attempts
- Minimal lecturer assessment effort
- Facility to track student progress (score and duration spent on quiz)

It is expected that a significant amount of time will be invested in developing suitable quizzes; however existing quizzes will be used where appropriate.