



NUI MAYNOOTH  
CENTRE FOR TEACHING  
AND LEARNING

# TEACHING FELLOWSHIPS 2012 - 2013



## **A virtual bridge between Maynooth and Kilkenny for Software Development Students**

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The Department of Computer Science has recently received funding under the Springboard programme to run a one-year part-time (30 credit) Higher Certificate in Software Development (HCSD) in our Kilkenny Campus, with a first intake of 25 students scheduled for September 2012. The aim of this programme is to equip currently unemployed non-CS graduates with the basic skills in Software Development. Coupled with a work-placement programme, this will allow these graduates to access employment opportunities in a sector where there is still significant demand.

This new programme poses challenges on a number of fronts. These students will be mature students, returning to education (possibly after a significant gap), dealing with a wide spectrum of new technologies, and it represents the start of the department's formal involvement with our Kilkenny campus. The lectures and labs will be provided by academic staff commuting from the Maynooth campus, replicating the structure of the modules that are already being delivered at Maynooth.

The focus of this proposal is to provide an additional infrastructure, based around virtual learning technologies, to support these students. In particular, we hope to foster access to the educational environment at Maynooth by establishing a virtual bridge with our Kilkenny campus, linking the students in Kilkenny with their peers at Maynooth.

We propose to establish the equivalent of a "help-desk" on the Maynooth campus, staffed by undergraduate and postgraduate students from our existing degree programmes. The help desk would not be module-specific, but would span all six modules in the HCSD, and focus in particular on assistance with the core technological skills encountered on the certificate. Our experience to date with programmes in Maynooth has shown that developing confidence in such technologies, particularly the threshold skill of programming, can pose a significant barrier for students who are new to the discipline. All of the modules on the HCSD are already taught on our first and second year programmes at Maynooth, so we have a significant pool of students who are skilled in the relevant areas.

Since the students are based on a separate campus, the help desk would have to be virtual rather than physical. The university, through the CTL, has already made significant progress in pioneering and establishing assistive technology in this area, most notably the Moodle system, and is investigating others such as Blackboard Collaborate and Elluminate, and these can be used as a backbone for the help desk. We propose, however, to also investigate other technologies, most notably the virtual environment Second Life.

The impact and potential of environments such as Second Life on teaching and learning is still not fully established, but we believe that, in this context, they may provide an interesting and attractive approach to developing and fostering a learning community between our two campuses. In particular, the novelty of Second Life should appeal to CS-oriented demonstrators, and the existing technical environment in the department is well-suited to its use. Further, the use of such technology will in itself constitute a learning experience for the students on the HCSD, broadening their experience in Computer Science.



James Power has been lecturing in Computer Science for 20 years, 14 of them at NUI Maynooth. His research centres on program analysis for software comprehension and verification. In teaching he is particularly interested in standards of programming, as well as the use of primary sources in CS education.