Quality Implementation Plan for the Department of Computer Science

This plan was agreed following a meeting of the President and Head of Department on 14 March 2011

The peer review report does not contain an explicit list of recommendations. The list here has been extracted from the text and numbered in the order they appear there-in.

1. Recommendations which the Department could implement unaided

Recommendation 1: *Develop an explicit Student/Staff ratio target*
Response of Department: The department has adopted a staff/studio ratio target to be on a par with the mean for laboratory-based science subjects. From reaching an extreme (approximately 1:10) in 2007, the ratio is now close to the norm for science faculty (1:18). Circumstances outside the direct control of the department (employment control framework, university policy on balancing minimum entry points v first year numbers, trends in choice of subjects in omnibus programmes, availability of funding to support research students) make it difficult to hit this moving target but the department's aggressive undergraduate recruitment efforts should mean it should stay close to this level in the foreseeable future.
Action: It was noted at the meeting in March 2011 that the staff /student ratio for the Department is now 1:18, while that of the Faculty is 1:22; further, the outlook for the coming academic year 2011-2012 is good with the number of applications for places up by as much as 60% for some courses. The Department is to ensure that its recruitment efforts, which have successfully increased numbers of incoming students, are directed also to maintain or increase the quality of the intake as indicated by the levels of CAO points.

Recommendation 2: *Take greater responsibility for the marketing of the department's existing courses, including the development of stronger relationships with local schools.*
Response of Department: The department has an aggressive programme of outreach to schools including:
- Annual computing summer camp for teenagers heavily promoted in local schools and the local area.
- Full participation in Science Week promotions including open labs and demonstration lectures
- Invitations to schools for half-day and full-day computer lab classes aimed at transition and senior cycle
- School visits to promote CS programmes
- Development and maintenance of a special website for teenagers (csrocks.cs.nuim.ie)
- Mail-shots to schools promoting the above.

As well as continuing and increasing this activity, the department currently has plans, subject to resources and university approval, of offering a course for senior cycle students for a certificate to exempt them from 5 first-year credits.
Action: In addition to all these activities, the Department is to promote the Kildare STEM Scholarship programme, which is intended to provide support for students who reside in County Kildare at the time of application or have attended a school in County Kildare.

Recommendation 4: *Continue to explore opportunities for collaborative programmes within the University*

Response of Department: In addition to the Music Technology and Multimedia programmes highlighted in the peer review, the department has continued to develop collaborative programmes with others including the MSc in Geocomputation completing its first year in 2010. Currently plans are also advancing for a Computer Science and Mathematics degree and a joint MSc with Electronic Engineering and Product Design for local industry. In addition the department is increasing contributions to programmes run by other departments, in particular Electronic Engineering with Computers/Communications and Product Design. The department will continue to exploit any such opportunities that arise.

Action: The proposed new Computer Science and Mathematics degree has been sent to the Academic Programme Subcommittee for consideration. A working group consisting of the Dean of Graduate Studies together with representatives of various interested departments is exploring the possibilities for the joint MSc, with an emphasis to be placed on entrepreneurship.

Recommendation 5: *Continue to examine opportunities for retraining programmes arising from the current economic situation*

Response of Department: The main retraining programme the department offers is the Higher Diploma in Information Technology. The department markets this on campus through email-shots, posters and information sessions to final year students doing non-computing degrees. In 2009, the HDipIT was offered part-time, funded under the Labour Market Activation scheme. The department wished to make this an on-going programme but it was deemed unsuitable for LMA funding in 2010 due to a change in the eligibility conditions. The department plans to apply again under LMA or similar schemes if they arise. In addition, the department will explore opportunities with local industry for retraining programme opportunities.

Action: The Department is to apply for the part-time HDipIT to be eligible for funding under the Springboard initiative in the coming academic year 2011-12.

Recommendation 7: *Carry out an annual review of progress wrt review outcomes and action plans.*

Response of Department: The department has put "Progress wrt quality review outcomes" as a standing item on the agenda for its first staff meeting of each year where the head of department will report on progress and actions proposed for progressing.

Action: The response of the Department was approved.

Recommendation 10: *Adopt a three-and-a-half year target for PhD completion*

Response of Department: The adoption of a 4-year structured PhD model by the university for all new students from 2010 makes this recommendation less relevant.

Action: The Department will follow the practice that has been agreed by the University for a four year structured PhD.

Recommendation 11: *Adopt a more flexible approach to ownership and use of laboratory space.*

Response of Department: Research students have two dedicated research laboratories, each student being allocated a cubicle. Postdoctoral researchers are given office space (usually shared). The rise and fall of researchers in particular areas therefore dictates the amount of space allocated to those research groups. Apart from this, the department has little dedicated research space available. Research groups with special equipment (e.g. digital holography, neuro-computation) have been provided with dedicated space. The department has only one

general research laboratory which is shared and available to any staff whose needs are not already met.

Action: It was agreed that the Department is already sharing laboratories for joint work with researchers from other areas, such as An Foras Feasa and the Callan Institute, and is not in a position to provide further research space.

Recommendation 19: *Teach additional languages to Java as part of the undergraduate programmes*

Response of Department: The department, in common with most other computer science departments, uses Java as its main teaching language in first and second year. We already teach other languages in later years (including C++, Prolog, Haskell, ladder logic). As part of annual curriculum reviews, the department will consider the variety of languages taught on its programmes.

Action: The response of the Department was approved.

2.   Recommendations which the Department could implement only with assistance from other bodies within the University and without cost implications

Recommendation 3: *Explore wider student recruitment markets both within Ireland and internationally, in partnership with the University.*

Response of Department: The department has a regular dialogue with the International Office regarding opportunities for recruiting students and entering agreements with foreign universities. The department also actively pursues students in China for our undergraduate degrees and summer schools. The department is also actively proposing a Computation degree with an honours maths requirement, designed to attract the top students from throughout the country.

Action: The Head of Department **is** to meet the Director of the International Office to discuss the recruitment activities of the Department, particularly as regards China, in the light of the Business Plan produced by the International Office.

Recommendation 8: *Mentor, train and manage early years of new staff.*

Response of Department: The Department will consider assigning mentors to new staff to help them become familiarised with structures, research interests, useful contacts, etc, within the University and beyond.

Action: This has been adopted as departmental policy.

Recommendation 13: *The relatively low percentage of female students and staff in the Department should be reviewed to ensure that all reasonable steps to address the imbalance have been considered.*

Response of Department: The department's outreach programme is organised to ensure female school students are included as much as possible. All presentations to potential students explicitly include references that computer science and related programmes are

suitable for all. The inclusion of CS in the BA curriculum several years ago has also resulted in many more females including CS in their degrees at NUI Maynooth.

Staff recruitment procedures within the university include measures to ensure fairness and lack of discrimination. The Employment Control Framework in force means that little can be done at this stage to address staff imbalance although it should be noted that the most recent appointment to academic staff in the department was female.

Action: The response of the Department was approved and its continuing efforts commended. The Department will monitor how its distribution of male/female students compares with other Computer Science Departments, and will continue to consider the achieving of gender balance a matter of priority.

3. Recommendations which the Department could implement only if additional resources are provided by the University

Recommendation 6: *Continue to monitor and provide pastoral care for current students.*

Response of Department: At the department level, a student mentoring scheme for first year is being piloted, assigning each student to one demonstrator in labs so consistent monitoring of all students is possible throughout first year. The extra tutor/demonstrator time needed for this was funded by a specific grant but the department's ability to continue this depends on resources available from the university.

Action: The current arrangements for mentoring first year students were approved, and the University is to provide €2,000 to ensure continuation in 2011-2012.

Recommendation 21: *Increase the amount of space for student group work in the department*

Response of Department: The department plans to request the re-assignment of laboratory space lost to other units on campus over recent years to cope with the space demands of our increasing student numbers. This will allow space to be allocated for group work.

Action: The space vacated by An Foras Feasa has been allocated to enable students to undertake group work without disturbing others.

4. Recommendations for the University rather than the Department

These recommendations do not require responses from the Department, and the actions in each case will be considered by the appropriate body within the University unless otherwise indicated.

Recommendation 12: *The means of resourcing the innovative degree programmes run with Music (specialist equipment) and Media (specialist staff) to ensure continued leadership in these areas needs to be reviewed routinely For example, the University should ensure that cross department initiatives have a clear way of managing resourcing issues.*

Action: This is to be raised by the President at Senior Officer level.

Recommendation 14: *Improve local transport*

Recommendation 15: *Make available an adequate amount of parking for staff and students on campus*

Recommendation 16: *Speed up reimbursement of postgraduate expenses*

Recommendation 17: *Improve Wi-Fi access in north campus*

Recommendation 18: *Install additional socket outlets in lecture rooms, labs and public spaces*

Recommendation 20: *Increase the amount of social space on campus*

Recommendation 22: *Adjust quality review teams' schedules to include more emphasis on research and enterprise*
Action: This recommendation, along with all other recommendations in Peer Review Reports, will receive serious consideration by the QPO

Recommendation 23: *Allow the quality review team to determine their own schedules*
Action: There are almost insuperable logistical difficulties in allowing the reviewers to determine their own schedule: the external reviewers are not on campus until the Peer Review Visit begins, and it is then too late to try to arrange interviews with people on campus, many of whom have crowded diaries. A draft timetable is sent to the external reviewers before they arrive to give them an opportunity to suggest changes.

Recommendation 24: *Nominate a chair for each QR panel*
Action: This will be considered during the review of *Quality Review Guidelines* to take place after completion of the second cycle reviews.

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President   **Head of Department**