

DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

PEER REVIEW GROUP

- Professor J. K. Collins, Departments of Medicine & Microbiology, UCC (Chair)
- Dr B. O'Connor, Department of Process & Chemical Engineering, UCC
- Professor P. O'Donoghue, Department of Civil Engineering, NUI Galway, Ireland
- Professor Dr. A. Jutila, Department of Civil and Environmental Engineering, Helsinki University of Technology, Finland.

SITE VISIT

The site visit was conducted over 2.5 days from 1-3 June 2005 and included visits to departmental facilities in UCC and in Togher and meetings with

- Head and staff of the department as a group and individually
- Representatives of undergraduate and postgraduate students
- Representatives of employers, past graduates and other external stakeholders
- Professor Paul Giller, Registrar & Vice-President for Academic Affairs
- Professor Peter Kennedy, Vice-President for Research Policy & Support
- Mr Michael O'Sullivan, Vice-President for Planning, Communications & Development
- Professor Robert Yacamini, Professor of Electrical & Microelectronic Engineering and former Dean of Faculty of Engineering
- Ms Carmel Cotter, Finance Office
- Ms Margot Conrick, Head of Information Services, UCC Library
- Mr Liam Hodnett, Dean of Engineering CIT
- Dr Joe Harrington, Head of School of Building & Civil Engineering, CIT

An exit presentation of the principal findings of the Peer Review Group was made to staff of the department in the afternoon of the second day.

DESCRIPTION OF DEPARTMENT

Note: Data given is for the academic year 2004/05

Head of Department:	Professor Philip O'Kane
Staff:	10 academic staff (1 Professor, 2 Associate Professors, 4 Senior Lecturers, 3 full-time Lecturers, 3 part-time Lecturers), 6 Technicians, 2 Administrative Staff, 1 Departmental Operative
Staff Academic FTE:	12.39 (10.67 FTE academic staff; 1.72 FTE part-time budget)
Student/Academic Staff Ratio:	16.96
Location of Department:	Civil Engineering Building, Premises at Togher, ERI
Degrees/Diplomas offered:	BE, BSc, MEng, MSc, PhD

NUMBER OF STUDENTS

The Department has 210.18 Student FTEs distributed as follows:

Undergraduate Student FTEs

Year 1	Year 2	Year 3	Year 4	Total U/G	Economic	Visiting European
31.37	43.00	56.37	58.44	189.18	1.93	2.79

Postgraduate Student FTEs

H Dip	Master Taught	Master Research	PhD	Total P/G
0	0.50	11.00	9.50	21.00

MISSION STATEMENT

“To provide an excellent undergraduate education to our BE Students, in an atmosphere which is demanding, yet supportive and in an environment which emphasises individual responsibility within group working, with a view towards them becoming graduates who are technically competent, environmentally aware and ethical, professional engineers.

To conduct research to international standards in areas of civil and environmental engineering of regional, national and international importance.”

GENERAL COMMENT ON QUALITY REVIEW

The Department of Civil & Environmental Engineering, including the two research units, HMRC and CPPU, prepared a self-assessment report, which was submitted to the reviewers in advance of the site visit. The PRG commended all the reports and found them to be honest, comprehensive and well prepared. The PRG agreed the reports adequately reflected the situation of the Department at this point in time.

The undergraduate Civil Engineering degree programme is highly recognised nationally and has the highest entry standards of any engineering degree programme in Ireland. It is evident that outstanding graduates are produced as testified to by employers, and by the external members of the PRG and the professional body, The Institution of Engineers of Ireland. Students interviewed during the site visit expressed their satisfaction with the delivery of the programme but did suggest they would like to see a formalised summer 3rd Year work placement module introduced into the programme.

The Department is clearly competitively research active as evidenced to by the number of research grants awarded to staff of the Department, the high level of research income, and the publication records. The research programmes are conducted as independent activities of staff and the PRG felt that greater synergy could be achieved with a higher level of interaction between the research groups.

It is also evident that there is a concern at the age profile in the Department. There are both recent and imminent retirements, which, if not replaced, effectively reduces the number of staff from ten full-time academic staff to eight. The establishment of the Department is twelve, achieved in the 1970s. These retirements threaten the core disciplines within the department and the survival of the discipline of the Department of Civil & Environmental Engineering at UCC. This is a major concern voiced particularly by the external members of the PRG and one, which the PRG are agreed, requires urgent attention by the university.

It became clear during the discussions with staff and Officers of the University that the proposed development of the provision of a Degree in Architecture is planned to be a joint venture between UCC and CIT. It was the view of the PRG that while this is a welcome development, it is important that the department be fully engaged in the process. It is clear that additional resources will be required and the PRG felt that these should not be supplied at the expense of core disciplines in Civil & Environmental Engineering at UCC. The PRG were of the opinion that UCC should put in place a negotiating team to guide the university in all negotiations regarding planned programmes in architecture and comprising, among others, members of the Department of Civil & Environmental Engineering. It is important that the department is fully engaged in this process and that any developments in the creation of a Degree in Architecture /Department of Architecture should only serve to enhance UCC's Civil Engineering Degree programme.

The PRG were surprised at the level of resources of the department, viewing the department as relatively poorly resourced in terms of quality and quantity of space, facilities, equipment and staff. In the opinion of the PRG and the external stakeholders, there is both sufficient student demand for the programmes and sufficient employment opportunities to allow expansion of student numbers. The academic staff are under serious pressure to meet the demands of the curriculum and the administrative demands placed on them by the university.

SWOT Analysis. The Department conducted a swot analysis of the activities. The PRG commended and endorsed the analysis produced by the Department. It was reflective and commented on issues such as communication within the Department and between the Department and the University; space issues and resourcing issues, the quality of the students and graduates and proposed future developments. Such issues were confirmed during interviews with all stakeholders.

Benchmarking. The PRG noted that benchmarking was not completed in the self-assessment process. Some staff of the Department felt that the benchmarking exercise should not be carried out because, in their view, there was no comparable department or unit either in Ireland or elsewhere with such limited resources. The PRG were of the view that this would have been an opportunity to quantitatively demonstrate the paucity of resources on a comparative basis, particularly in terms of numbers of academic staff.

PROGRESS MADE ON THE IMPLEMENTATION OF PRG RECOMMENDATIONS

A meeting to discuss progress made in implementing recommendations for improvement arising from the review of the Department of Civil and Environmental Engineering was held on 2 November 2006.

Present: Professor Patrick Fitzpatrick, Head, College of Science, Engineering & Food Science
Professor Philip O'Kane, Head, Department of Civil & Environmental Engineering
Dr. Norma Ryan, Director, Quality Promotion Unit
Mr Gerard Horgan, Executive Assistant, Quality Promotion Unit

Abbreviations

PRG: Peer Review Group

QPC: Quality Promotion Committee

HR: Human Resources

CIT: Cork Institute of Technology

ERI: Environmental Research Institute

VP: Vice-President

QIP: Quality Improvement Plan

SEFS: Science, Engineering & Food Science

IT: Information Technology

HMRC: Hydraulics & Maritime Research Centre

Recommendation of PRG	Recommendation of QPC	Follow-up report November 06
That the Department form a representative committee to develop a collective responsibility for the management and future of the Department.	Recommendation strongly endorsed.	Not implemented. A representative committee is not deemed to be appropriate for the needs of the department at this point in time.
That Dr. D. Ó Cinnéide and Professor J. Campbell should each be replaced by two college lectureships.	The QPC noted that a replacement post had been approved and advertised. The matter of the additional post was referred to the Head of College.	Implemented. Two replacement posts have been sanctioned, one has been filled and the other is currently in progress.
That the endowed chair in IT in Architecture, Engineering or Construction should be advertised as a career long post rather than a contract post based on future retirements.	Implemented. Chair has been advertised and filled.	-----
That an increase in the student quota should be actively considered.	Recommendation endorsed.	Not implemented. This issue will be considered in context of Prof. O’Kane’s retirement in two years and overall future of the Department.
That consideration be given to putting in place a Work Placement module at the end of 3 rd Year.	Recommendation of PRG endorsed. QPC suggested that the Department discuss the issue of support with the Head of the College of SEFS, noting that there is already support for work placement programmes in the College. The QPC also referred the Department to the Department of Electrical & Electronic Engineering which has a very successful 3 rd Year work placement programme.	Implemented. 9 students took part in an initial placement last year. Examination of placement programme required involving possible liaison with relevant University services.

Recommendation of PRG	Recommendation of QPC	Follow-up report November 06
That streaming in final year of the undergraduate programme should be discontinued.	Recommendation endorsed	Implemented 2006/2007 options are now grouped.
That site visits should form an integral part of the undergraduate curriculum.	Recommendation endorsed. The QPC strongly recommended that the Department ensure that such health and safety training as is necessary to allow personnel access to construction sites is provided to all engineering students, perhaps enlisting the assistance of the UCC Safety Officer.	Implemented Appointed Mr. Mark Poland (Building & Estates office) to part-time position (teaching & co-ordination of site visits). Mr. John Ring also gives a module on Health & Safety.
That consideration should be given to increasing the proportion of the final grade as assessed by continuous assessment.	QPC agreed with the Department and noted that consideration had been given to the recommendation.	Ongoing.
That the Department should immediately initiate the formation of an Industry Advisory Board preferably chaired by a distinguished external person.	Recommendation strongly endorsed. QPC would welcome immediate action on this recommendation.	Implemented An Industry Advisory Board has been formed.
That the Department and university must work together to ensure there is adequate bi-directional communications. Clarification of certain funding issues is a step in the right direction.	Recommendation strongly endorsed.	Implemented. Channels of communication have been changed and are now working better.
That the loss of space in recent years, which has led, inter alia, to serious overcrowding in laboratories in particular, is addressed by the University.	QPC noted that additional space will be provided in the ERI Building and in the planned IT Building.	Ongoing Department to move equipment to ERI building. Interface with ERI is not clear while relationship with Research Institutes needs to be explored.
That both staff and students should avail more of the enhanced services available from the Library e.g. training, customer services, journal access	Recommendation endorsed.	Ongoing

Recommendation of PRG	Recommendation of QPC	Follow-up report November 06
That the identity of the Engineering Faculty must be maintained in any new academic structure put in place by the university.	Recommendation endorsed.	Ongoing.
The PRG endorses the proposal for a degree in Architecture between UCC/CIT.	Recommendation endorsed.	Implemented
That Civil & Environmental Engineering as a department is fully engaged in this process of discussions on a proposal for a degree in Architecture and that any developments in the creation of a Department of Architecture should only serve to enhance UCC's Civil Engineering degree programme.	Recommendation endorsed.	Implemented.
That, in recognition of its importance and unique contributions, the HMRC must be given better support from the university for the continuity of this specialised activity.	QPC endorsed the recommendation and confirmed that the University will provide all assistance possible in facilitating increases in research income to support this area.	Ongoing
That issues of continuity and career prospects for university research staff be considered by the university and at a national level.	Recommendation endorsed. The QPC noted that this is an on-going issue for universities in Ireland and UCC is fully engaged in local and national discussions on this issue.	Ongoing Issue being examined at a local and national level