

Department of Civil & Environmental Engineering

Head of Department: Professor P. O'Kane

No of Staff: 10 full-time and 1 part-time academic staff; 6 technical staff; 1 attendant; 1.5 administrative staff

Location of Department: Civil Engineering Building, Main Campus

Diplomas/Degrees offered: BE (Civil), H Dip in Environmental Engineering, Higher Diploma in Mechanical Engineering, MEngSc, PhD

No of students: 60 admitted into the BE (Civil) degree programme each year (an additional 5 mature student places are also available)

Mission of the Department

“To promote science, technology and innovation for an engineered and sustainable society.”

Goal of the Department

To fulfil the mission through teaching, research and development, and professional service, at a European standard by 2005. To achieve this goal the Department must increase student numbers, rebalance the faculty staff, re-new the curriculum, radically change the use of space, and acquire modern engineering and scientific equipment.

Summary of Recommendations made by Department in accreditation document

- Development of major new directions in BE Degree programme to meet national demand in specific areas.
- Development of a Higher diploma in (a) Sustainable Energy and (b) Environmental Management Systems
- Development of new graduate modules to provide part of an improved research infrastructure.
- Recruitment of 8 additional academic staff and 3.5 administrative/support staff required allowing implementation of recommendations 1-3 above.
- Consolidation of all laboratory facilities in a single building – currently laboratory facilities are split on a number of sites leading to inefficiencies. This recommendation includes removing from the space currently occupied by the department in the basement of the Science Building.
- The Department has lost 60% of the space allocated to it over the past 3 years. Restoration of at least some of the space is essential if the Department is to maintain the quality of its degree programmes.
- A new laboratory for IT and Construction is required.
- Restoration and refurbishment of existing equipment in the Structures Laboratory is required.
- Increase in support funding for purchase and maintenance of essential software, and for the acquisition of modern engineering and scientific equipment.

Decision of the Institution of Engineers of Ireland

That the BE (Civil) Degree be re-accredited for the five year period 2000-2004.

Summary of Recommendations to the University made by Panel of Reviewers

- 1 Much of the laboratory equipment is old and inadequate and should be immediately modernised and replaced.
- 2 The provision of equipment for materials (including road surface materials) and environmental engineering laboratories should be addressed.
- 3 Space deficiencies for laboratories, including drawing and computer aided design laboratories, should be rectified and a previous proposal to consolidate facilities in a single location considered a priority.
- 4 There should be an improvement in the number of computers available to students and the extent of instruction in the use of computer packages should be increased.
- 5 In the absence of a drawing office setting, arrangements should be made whereby students may develop teamwork skills.
- 6 The level of funding for books and journals for civil engineering in the university library should be increased with particular reference to the provision of funding for the purchase of books
- 7 A formal system of feedback of views from students to staff should be included as part of the quality assurance process.
- 8 A formal process for liaison with industry should be established by the department so as to assist in the development of the programme

The Panel expressed concern that these recommendations should be implemented within a two-year period.

Recommendations of Quality Promotion Committee

That the department prepare detailed costings and specifications necessary to implement recommendations 1-4 above and present them for consideration to the appropriate bodies in UCC. The Department has also been asked to give an account of resources allocated over the past five years and where these were deployed within the Department, including a statement of the relative amounts spent on teaching purposes and research purposes.

The Committee acknowledges that the Department has already put in place plans to meet the recommendations 5-7.

That the Faculty of Engineering plans to initiate a formal liaison process with industry representatives be implemented as soon as possible.

General Comment

The BE Degree in Civil & Environmental Engineering has the highest ratio of first preferences of CAO applicants to places of all the departments in the Faculty of Engineering and higher than most other departments in the university. To maintain the status and position of the degree in the country it is necessary to implement the recommendations of the report of the IEI. Indeed it is essential if the IEI is to continue to accredit the degree.

Progress on Recommendations for Improvement

Recommendation of PRG	Recommendation of QPC	Follow-Up Report – Oct. '02
Much of the laboratory equipment is old and inadequate and should be immediately modernised and replaced.	Endorsed recommendation. And recommended that the department prepare detailed costings and specifications necessary to implement recommendation and present them for consideration to the appropriate bodies in UCC	Discussions did take place and significant donations were received to enhance the quality of research equipment and to fund an endowed chair. However the issue of who should pay for the basic teaching equipment, for complying with the Health & Safety regulations, refurbishment of laboratory benches,

Recommendation of PRG	Recommendation of QPC	Follow-Up Report – Oct. '02
		etc. has still not been resolved. To date €500,000 has been allocated to research grade equipment expenditure. A number of works in the Department of Civil Engineering and in the Basement of the Kane Building have been approved and are almost completed.
The provision of equipment for materials (including road surface materials) and environmental engineering laboratories should be addressed.	Endorsed recommendation. And recommended that the department prepare detailed costings and specifications necessary to implement recommendation and present them for consideration to the appropriate bodies in UCC	One issue is the sourcing of monies to provide the materials. This has not yet been done. The second issue is the provision of appropriate technical assistance. A technician has been recruited on a 1-year contract for 01/02 and permission to renew the contract for a further period is currently being sought from the Dean of Engineering.
Space deficiencies for laboratories, including drawing and computer aided design laboratories, should be rectified and a previous proposal to consolidate facilities in a single location considered a priority.	Endorsed recommendation. And recommended that the department prepare detailed costings and specifications necessary to implement recommendation and present them for consideration to the appropriate bodies in UCC	This issue has not been addressed. The department has made applications, particularly in relation to the consolidated laboratories site but there has been no outcome as yet. The department lost some space a few years ago and this has not been replaced.
There should be an improvement in the number of computers available to students and the extent of instruction in the use of computer packages should be increased.	Endorsed recommendation. And recommended that the department prepare detailed costings and specifications necessary to implement recommendation and present them for consideration to the appropriate bodies in UCC	Additional computing facilities have been provided for students within the existing space.
In the absence of a drawing office setting, arrangements should be made whereby students may develop teamwork skills.	QPC acknowledged that the Department has already put in place plans to implement the recommendation.	The department encourages development of teamwork skills in a number of different ways, including the final year project which is carried out in teams, laboratory classes where students routinely work in groups of between 2 – 6. The department is still hoping to work towards additional drawing office space being provided.
The level of funding for books and journals for civil engineering in the university library should be increased with particular reference to the provision of funding for the purchase of books	QPC acknowledged that the Department has already put in place plans to implement the recommendation. QPC commented that perhaps some funds from research could be used to support research library materials and thus free up some resource for buying materials for undergraduate programmes.	€20,000 has been assigned from the departmental resources for the purchase of additional books for the library in the coming year.
A formal system of feedback	QPC acknowledged that the	Department has implemented this

Recommendation of PRG	Recommendation of QPC	Follow-Up Report – Oct. '02
of views from students to staff should be included as part of the quality assurance process.	Department has already put in place plans to implement the recommendation.	recommendation in full, as indicated in the departmental response.
A formal process for liaison with industry should be established by the department so as to assist in the development of the programme	QPC recommended that the Faculty of Engineering plans to initiate a formal liaison process with industry representatives be implemented as soon as possible.	The faculty has not yet set up a Faculty Liaison committee. The Professor of Civil Engineering will initiate action on this recommendation early in September.

Recommendation of QPC	Follow-Up Report – Oct. '02
That the IEI should be informed in writing of actions taken as a consequence of the review report. A copy to be sent to QPC for information	Will happen in September.
Benchmarking of Department against one or more departments at a national/international level.	The department is already benchmarked because of the requirement for accreditation of the BE Degree by the IEI. The department is very restricted in curriculum and other activities because of the accreditation requirement. The department plans to review curriculum and activities of appropriate departments abroad prior to the next review.