



**In the matter of the report of the findings of the evaluation panel engaged to consider the application by the Athlone Institute of Technology for accreditation to maintain a postgraduate research degree register at Master's and Doctoral levels in Life and Physical Sciences, Polymer Engineering, and Software Engineering**

**Introduction:**

On behalf of the president and colleagues in Athlone Institute of Technology I hereby submit the formal response of this institute to the report of the evaluation panel chaired by Professor Anthony Fagan, School of Electrical, Electronic, and Mechanical Engineering, University College Dublin, that met on 24 June last with reports submitted through July and August 2008. Athlone Institute of Technology warmly appreciates the detail of the reports supplied and the pertinent advice contained therein and particularly acknowledges the supportive spirit that informed the proceedings on the day and the reports themselves. I record a vote of thanks to the chair and to the panel members for their preparation and work during the visit and in informing the draft reports; the institute also wishes to thank you personally and your colleague, Dr Peter Cullen, for facilitating this review in such a professional and efficient manner.

In respect of the return, the institute is delighted that the Higher Education and Training Awards Council is to receive the recommendation from the chair and panel that the institute be accredited to maintain a register of postgraduate degrees in the areas outlined above for a period of five years. The institute also notes with appreciation that the panel is confident that Master's and Doctoral graduates attain a quality that is equivalent to the standard typical of universities in Ireland and the United Kingdom. While this particular

wording may be anachronistic in an age of globalization with international standards and benchmarks, the positive intent behind the comment is gratefully acknowledged.

Athlone Institute of Technology has taken some time to review the reports supplied and wishes in the first instance to state that we accept fully the findings of the panel and value the recommendations made. The institute here sets out the manner in which it proposes to address the points raised and requests that you bring this response to the attention of Council.

### **General:**

A number of the recommendations may be termed general in that they impact on research and research support across disciplines. These are addressed in this section.

The question of the recognition that may be afforded to research-active staff, while raised especially in one element of a report, is one that has institute-wide significance. The report acknowledges the national dimensions pertaining to staff contracts. The institute takes note of the recommendation and is actively considering ways in which it can recognise and support research activity and research leadership. Initial discussions here propose that there is a readiness to afford such recognition.

The panel has noted the seminar series and the poster exhibitions that support research activity in the institute. These initiatives continue and are being built upon through the office of the Director of Research. The institute takes note of the welcome advice to engage a greater international input and is actively pursuing this matter.

The challenge of building research scale is noted by the panel. The very location of this institute is a factor in this respect but modern technological developments offer one solution. The institute is actively building upon existing cooperation and forging new research links in order to assist in widening the research community and opportunity for learners. The Director of Research is actively building opportunities for leveraging increased cooperation with other reputable higher education institutions.

The comments concerning postgraduate documentation are noted. The institute takes on board the comment that documentation should be as concise as possible and will increase efforts to ensure that all staff are aware of the necessary documentation and where one can access same. A devoted space on the intranet is in preparation and will contain all relevant papers and the community here will be so advised and reminded of same on a continuous basis. This should address the requirement to increase knowledge of the governing procedure and to ensure that same is realized in consistent implementation.

This return does not propose to address in turn every item raised by the evaluation panel but rather seeks to assure the Council that the institute accepts in full the recommendations and values the helpful observations made. A schedule of work in

respect of each item is being prepared by the departments concerned and the institute management team will be reviewing the progress on these matters over the coming period.

## **Discipline-specific return**

### **Polymer Engineering:**

3.1.1 Ensuring that appropriate feeder undergraduate programmes be put in place as soon as possible:

Response: This has actively engaged the institute for some time. Notwithstanding focused marketing and the positive engagement of management and staff within the school, there has been a notable decline in interest from prospective undergraduates in the polymer programmes. In this respect the institute notes with especial interest the opinion of the panel (4.1.10) that the department might usefully reflect on the title. Given the changing nature of the applications associated with the field, the institute is actively considering this advice and if one effect of change were to be an increased openness on the part of prospective learners to reengage with the discipline, then this would be a substantive argument in favour of such change.

3.1.2 The appointment of sufficient additional research-active academic staff members, commencing with the appointment of a senior principal investigator in the short-medium term.

3.1.3 Creating greater flexibility in principal researchers' contracts of employment, perhaps through looking at areas of remuneration and the type of rewards available to research active staff

Response: This point has been addressed above in the general section.

3.1.4 Broadening the range of international speakers presenting at seminar series; seeking additional research collaborations, e.g. many UK groups are carrying out high quality research in areas overlapping with research activity in AIT.

Response: As above, the institute appreciates this advice and will act on same.

3.1.5 Providing greater and more accessible information on the website on research conducted and having information on the research profiles of staff members.

Response: This is a valid and helpful proposal from the evaluation panel. The institute is aware of deficits in this regard and has commissioned a review and redesign of the website consistent with the requirement to provide pertinent information to staff, students, prospective learners, and the broader community. This project is at an advanced stage and the proposal is to have a dedicated and managed research space that can inform and assist the growing research community here.

The following comment is also noted:

There may be scope for greater up-skilling of technical staff. Much of the expertise resides with academic staff and students.

Response: The institute concurs with this observation. The progress in facilities available for research makes this an imperative and while the matter occasions challenge at this particular period of stress upon public finances, the institute fully accepts that it must discover a means to address this.

### **Software Engineering:**

The institute notes that conditions are attached to this advised accreditation.

#### 3.2.1 A plan to increase student numbers be implemented as a matter of priority.

Response: The institute interprets this comment to refer to the number of registered students undertaking programmes at Master's level. The completion of the new engineering block will support the existing capacity and ambition to realise an increase in student numbers in the immediate future. As the panel will have noted, the institute is supporting this ambition through the current reconfiguration of its research structures. In respect of software engineering this initiative will include more focused industrial linkages which offer significant potential to increase the cohort of Level 9 research candidates. In addition, the school of engineering has devoted considerable energy to the creation of new undergraduate programmes in the separate areas of games, programming, and web technologies. Along with the existing suite of programmes, this will provide a stronger undergraduate foundation for increase in research take-up. The school is also completing a redraw of its add-on software Level 8 degree that will prove more attractive to learners and one that will support advanced progression for those demonstrating the necessary aptitude and ambition. The growing strength of the taught Master's programmes in the discipline is also proposed as a factor that will assist in growing the research capacity.

#### 3.2.2 That all students undertake compulsory units on research practices which include writing skills, project management, information sourcing, presentation skills, etc.

Response: It is anticipated that this initiative will apply to all learners undertaking research programmes in the institute and AIT is actively contributing to a sectoral SIF project toward this end. In the interim, in-house supports are available and are being expanded; such supports have met with warm appreciation from researchers.

3.2.3 A key performance indicator schedule for each research programme be developed.

Response: Given that each research programme is an individual entity with its associated objectives, it remains under discussion how best the institute can satisfy this particular requirement. The institute will welcome additional advice in this matter and is prepared to liaise direct with the HETAC executive on this.

The question of leadership is raised by the panel and while it is acknowledged that there is leadership in a group sense, the panel seeks to discover one single figure of authority. This point is especially noted by the institute and is under consideration. The institute, however, wishes to ensure that the solution that emerges does not in any way hinder active researchers by deflecting them into unwanted administration. It is thus most likely that the solution will involve some degree of structural change. It is further envisaged that this response will address the related issue of identifying a designated senior researcher. The panel has already divined the situation in this regard.

The institute fully accepts the points made by the panel in respect to assessment at the postgraduate level.

### **Life and Physical Sciences:**

The institute notes that conditions are attached to this advised accreditation.

4.1.1 PhD candidates should be encouraged and supported to publish at least two peer-review publications on the basis of their thesis.

4.1.2 Research Staff should focus on publishing in peer-reviewed journals, and where possible presenting at international conferences.

Response: This is fully accepted. The institute is conscious of the requirement to increase the number of publications emanating from research programmes. Research Staff will be encouraged and supported to contribute and present both nationally and internationally. The panel has graciously noted the improvements already made in this respect.

It is accepted that a balance must exist between equipping postgraduate students with the knowledge and skill-set to write effective papers that can disseminate the outcomes of well designed experiments along with the article generating capacity of research supervisors and other category researchers. Progression of the latter will be facilitated by further embedding and growing a research culture and pragmatic initiatives such as the proposed provision of additional time in order to support the preparation of papers and

submissions. The school proposes that a supportive environment, cohesive group structures, and widespread recognition of the critical academic role status of research will be key enhancers of research culture growth. It is further proposed that as an additional step toward supporting the traditional dissertation mode of PhD submission, a publication based model can be introduced for staff undertaking research.

4.1.3 The completion of the new research infrastructure should be prioritised; it is essential for the creation of a doctoral level environment.

Response: This is agreed. The evaluation panel will have noted the considerable change that has been effected in recent years and this is an ongoing process designed to support research endeavour. The forthcoming completion of an expanded research facility on the East Campus will address many of these needs.

4.1.4 In accordance with the HETAC's accreditation conditions, research candidates should only be registered in areas where there is appropriate supervision capacity. It is noted that candidates should only be registered in the niche areas specified where that capacity exists.

Response: This important condition is noted by the institute. It is the intention to register candidates only in areas where the institute has both the expertise and capacity to support same adequately.

In respect of the additional recommendations recorded, the institute offers the following response:

4.1.5 Very serious consideration be given to the recruitment of more research active staff, including post doctoral researchers.

4.1.6 Steps should be continued and enhanced to facilitate qualified staff who are not very research active at present to become much more research active.

Response: The reorganisation of research structures in the institute will support this and the institute is actively considering how it may expand its pool of active researchers. It is accepted that there are competencies inherent in the current staffing cohort that could be encouraged in this manner.

Since the original submission and the report from the evaluation panel, a new research active Head of Department with a PhD in inorganic chemistry has been recruited. It is accepted that the core of currently research active staff is still proportionately small by HEI benchmark standards. The transition from a core teaching-led institution status to one that reflects an innovative balance between teaching and research is in process. With the acquisition of more substantive research facilities, the resources for securing sustainable funding will permit the recruitment of an enhanced research community, particularly, one comprising postdoctoral researchers. The drive to secure research technicians/research officers has been on-going since 2000 and it is recognised as a

critical need, driven by acquisition of new complex research equipment and demand for a repository of research methods and training competence.

4.1.7 Links with other research and academic institutions, with similar interests, both in Ireland and abroad be strengthened and developed. It could be particularly useful to develop and exploit these links in the context of providing specialist postgraduate training.

Response: The institute has embarked on this road but it is accepted that much more can be achieved to afford our researchers an expanded community within which to operate. Sustainability has been recognised as a related and significant problem. Creation of real and virtual inter-institutional links are accepted as a viable strategy for assembling complementary research skills and experiences and creating functional albeit logistically dispersed groups. A model to establish peer partnerships with similar scale international institutions is currently under development. It is inevitable that the proposals under consideration for delivering graduate ‘training’ as an element of research education will be collaboratively based. Reference to this has already been recorded above.

4.1.8 There be a focussed implementation of all research strategic objectives and that there be a move from aspirational statements towards specific action plans.

Response: Departments sponsoring research in those areas that have attracted accreditation will, consistent with the institute’s new strategic plan, publish a plan of the strategic research goals with precise objectives and indicative timelines.

4.1.9 Departmental and institute documentation should be clear and factual. Areas of research that are not currently being carried should not be referenced. For example the accreditation application cites as research areas: protein and organelle purification and HTS ligand binding. However these are not currently active areas of research in the Institute.

Response: This critique and the attendant recommendation is accepted. In accordance with 4.1.4 above the department will review the documentation to ensure that the research enterprise is focused clearly on the areas of core competence.

In respect of the latter, and related, points the school of science concurs with the panel that the research domain title, ‘Life & Physical Sciences’, which reflects the name of the core department, is very broad and covers an extensive potential research territory.

Research projects to date have embraced:

- Cell & Molecular Toxicology
- Ecotoxicology
- Pharmacology
- Drug delivery
- Microbiology/Clinical Microbiology

Analytical Chemistry  
Synthesis and Purification

The latter research projects have not always been connected with biomolecular studies. It is therefore the school's considered view that the register of accepted research fields should encompass these traditional areas of analytical, synthesis, and purification chemistry. As above, the department has recently recruited a specialist inorganic chemist who has been continuously research active and will extend the physical sciences domain to include structural studies.

The reference to 'organelle purification' and 'HTS ligand binding' relates to current research within the department. It is accepted that these represent new fields for research development within the department and are consistent with the school research strategy. It is accepted that substantive prior evidence of research outputs in these fields needs to be demonstrated before they can be considered for inclusion in a domain register.

***Dr Joseph Ryan***  
***Academic Registrar***