

Quality Assurance / Quality Improvement
Internal Quality Review Programme

2015-16



Quality Improvement Plan

Faculty of Engineering and Computing

21st November, 2016

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1. Introduction

This is the Quality Improvement plan (QuIP) for the Faculty of Engineering and Computing for the period 2016-2021. It is prepared in response to the Peer Review Group (PRG) visit, which took place from 20-22 April 2016, and the subsequent Peer Review Group report, received on 16 June 2016.

The approach to the development of the QuIP was as follows:

- The PRG report was circulated to all staff in the Faculty on 20 June 2016. All staff were invited and encouraged to submit any comments or specific suggestions for the development of the QuIP.
- Initial draft responses to the PRG recommendations were developed by the Executive Dean and the Chair of the Faculty Quality Review Working Group (FQRWG), taking account of all comments and suggestions received. In each case, one or more members of the Faculty Executive Board (FEB) were identified to take responsibility for implementation of identified actions. Where applicable, specific draft responses were also considered by relevant Faculty committees (Faculty Teaching and Learning Committee, Faculty Research Committee and Faculty Services Committee).
- The full set of draft responses, together with prioritised outline resource requests, was considered and agreed by the Faculty Executive Committee, supported by the FQRWG Chair.
- On the basis of these discussions, final collation and editing of the QuIP was undertaken by the Executive Dean.

2. Responses to the Recommendations in the Peer Review Group Report

The following notation is used in the recommendations for improvement.

P1: A recommendation that is important *and* requires urgent action.

P2: A recommendation that is important, but can (or perhaps must) be addressed on a more extended time scale.

P3: A recommendation which merits serious consideration but which is not considered to be critical to the quality of the ongoing activities in the Area.

Additionally, the PRG indicate the level(s) of the University where action is required:

A: Area under review

U: University Senior Management

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
1	P2	A/U	Review and implement, where appropriate, a LEAN ¹ approach to streamlining processes within the faculty and interactions with central support units e.g. a simpler implementation of digital sign off on expenses.	The Faculty will review and prioritise administrative processes (both at Faculty and University level) for targeted improvement, within the period of the QulP. Preliminary indications are that improvements in processes around temporary staff contracts, and in relation to tracking of research performance metrics, would be particularly beneficial.	The university is supportive of this proposal, and the approach to develop capacity within the university for opportunities to streamline business processes, where applicable, within the faculty and university.
2	P2	U/A	Implement an annual staff feedback survey within the faculty, as a means of identifying and progressing ongoing issues raised by staff	The Faculty will engage with HR to develop an appropriate staff feedback mechanism. The faculty will also explore how feedback relevant to the Athena Swan principles and charter can be incorporated into any such survey.	The University is supportive of approaches to regularly receive and act on feedback within faculties and professional units. DCU notes the potential to use faculty level fora and committees for a vehicle for ongoing staff consultation and feedback. The university encourages the faculty to consider collaborating with both the HR and Institutional Research offices at DCU for support in developing a pilot survey.

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<http://www.lean.org/>

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
3	P1	U	Develop a framework to support and appropriately recognise succession planning for Heads of School within the faculty. Additionally, consider the identification and appointment of a recognised Deputy Head role within each school.	The Faculty strongly supports proactive leadership capacity development and succession planning. The issue of School management structures will be actively reviewed, and consideration given to Deputy Head roles where appropriate.	The university supports the principle of succession planning and an element of healthy organisational culture and risk management. The University has a number of mechanisms already in place and will continue to build on these, working with the Executive Dean of the Faculty. The university notes a number of leadership development programmes within the university which may support capacity building in this area, including the University Leadership and Management Programme and Aurora Leadership Programme.
4	P2	U	Convene a working group to identify issues, and plan the implementation of enhancements to the DCU website, addressing in particular structural and usability issues.	The Faculty is committed to maximising the impact of digital channels in its outreach and marketing activities. It will continue to work with and support University level activities, and also complement these, where appropriate, with local, Faculty level, initiatives.	The university has further developed the DCU website in 2015/16, including enhancements to the navigation on the site, and substantial changes to web content in light of the Incorporation programme. The university notes that the future development of the DCU website will benefit from the input of a wide range of stakeholders, including encouraging accessible access to online forms and tools for web-based work requirements.

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
5	P1	A	Initiate a cross-faculty forum to review and develop an enhanced and coherent Faculty identity, drawing on the experiences of both academic, administrative, technical staff and students.	The Faculty Executive Board will establish a cross-Faculty working group to consider and propose specific actions to strengthen the Faculty identity.	The university welcome this proposal. The university notes that similar work has been conducted within the Faculty of Science and Health in recent years, at relatively low cost.
6	P1	A	Develop a framework of partnership between Schools, Faculty and Research Centres, to explore resource sharing in order to maximise the effectiveness of resources within the faculty.	A working group will be convened consisting of School Heads and Research Centre Directors to review and propose opportunities to enhance resource sharing where possible.	
7	P1	A	In consultation with industry partners, review the INTRA programme across the Faculty to maintain its competitiveness	The Faculty Teaching and Learning Committee will establish a working group to review the operation of the INTRA programme, in consultation with industry partners, and propose specific actions as appropriate. The review will include consideration of INTRA duration, availability of sufficient placements, expectations/guidelines for remuneration, academic assessment of INTRA learning outcomes, etc.	The university welcomes this proposal. The ongoing strength of our INTRA programmes in providing a high quality and formative work experience for undergraduate is important in differentiating our undergraduate programmes. The university encourages the faculty to work closely with the INTRA office at DCU as part of any review, and looks forward to supporting future enhancements proposed as a result of the review.

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
8	P3	A/U	Review of staff induction process, with particular reference to faculty processes, induction content and communication.	In the context of reviewing administrative processes (recommendation #1), particularly affecting access at Faculty level to appropriate staff records, procedures will be put in place to ensure monitoring and delivery of relevant, local, staff induction.	The university welcomes the proposal made by the faculty in response to this recommendation, and encourages the faculty to discuss areas in which the university induction process, led by HR, can support quality improvement in this area.
9	P1	U	Ensure, when implementing the existing policy on staff progression and promotion, that teaching excellence is not overlooked, and criteria are transparent, and appropriately reflect excellence in all areas	The Faculty acknowledges the need to properly recognise the full range of activities involved in academic excellence, and to reflect this properly in promotions processes. The Faculty has engaged with the University Academic Promotions Committee on this issue, and will contribute proactively to ongoing review and enhancement of relevant University criteria and procedures.	The University values teaching and in particular research informed teaching and already has it equally scored and valued in all university wide processes. The University continues to examine and update these processes on an ongoing basis.
10	P2	U/A	Address the Technical staff promotion recommendation [sic] from previous quality review	Through the Faculty Executive Board, the Faculty will undertake a review of all current technical category staffing. The review will consider the evolution of technical staff needs over the period since the previous quality review, as well as the strategic needs of the Faculty in the coming years. It will consider what, if any, changes, to the current technical staffing complement (posts and grades) may be appropriate (within the structure of existing University grades and scales). If specific changes are proposed, the Faculty Executive Board will seek to identify feasible ways of implementing these changes within the available resources.	The university notes that grades and structures for technical staff are as a result of a national framework. Any changes proposed following a review must be within this agreed national framework and within budget.

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
11	P1	A	Review existing equipment/instrumentation and implement a lifecycle funding model.	The Faculty will engage with the University Finance Office to investigate the feasibility of an appropriate lifecycle funding model for equipment maintenance and replacement. In the context of ongoing review of University level budgetary and financial management processes, this will involve consideration of multi-annual budgetary planning, delegated to Faculty level, for this purpose. It is noted that ongoing investment in research facilities, specifically, affects the ability of the Faculty to attract external research funding, which in turn affects PhD student recruitment (cf. recommendation 16).	Provision for equipment replacement should be managed within the annual budget allocation to the faculty. The University has put in place some funding (€5m in total) through the Campus Development Plan for Teaching Equipment Replacement. Opportunities exist within the larger SFI centre grants for capital equipment funding but this currently has very limited impact on the Faculty. In seeking such funding, the costs should reflect the full total cost of ownership and not just the capital acquisition cost. The implementation of lifecycle funding can only be considered in the context of a step change in the Funding Model for the Third Level sector by Government.

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
12	P1	A	Establish appropriate, evidence-based entry requirements across the faculty to match student capability to course demands.	A project will be proposed to develop appropriate analysis and modelling tools, based on entrant profiles (leaving cert grades, CAO preferences etc.) and subsequent academic performance. This will be designed to provide an evidence base for regular evaluation of entry requirements, at both programme and Faculty level, integrated with annual and periodic programme review as necessary. With overall direction and guidance from the Faculty Teaching and Learning Committee, and with due regard to the admission principles adopted by Academic Council in February 2016, entry requirements for all Faculty programmes will be reviewed and changes proposed where appropriate. Where feasible, the provision of information relating to the prior educational profile of postgraduate taught students will also be considered as part of this project.	The university welcomes and supports the ongoing development of analysis tools to support decision making in relation to entry requirements. The university considers that any developed model may have potential value beyond the faculty.
13	P1	A	Extend the final year student Expo to include the hosting of prospective students and their parents, as a tool for undergraduate recruitment.	It is proposed to establish a new Faculty Marketing and Engagement Committee. An initial task for this committee will be to review the opportunities to enhance the impacts of the final year project expo. This will identify opportunities for further improvement, specifically including feasible engagement with prospective students and parents.	The university supports this proposal, and considers it to have the potential of being an innovative and creative opportunity to showcase student projects, which may be of interest to prospective students. The university encourages the Faculty to consult with the DCU Marketing Manager and student recruitment team for additional support and co-ordination of future events.

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
14	P1	A	Establish an inclusive and transparent process for retiring existing programmes and initiating new programmes which includes consultation with relevant internal and external stakeholders.	The ADTL will prepare a formal Faculty process document, detailing the local processes for retiring existing programmes and for initiation of new ones.	The university supports the ongoing process of evaluation in the creation, development, and where appropriate, retirement of programmes. The university encourages consultation with the Dean of Teaching and Learning and VP Academic Affairs in developing a process document.
15	P1	A	Develop a co-ordinated Faculty approach to industry interaction to ensure continuing industry relevance of programmes.	The Faculty Executive Board will review the operation of the existing School and Research Centre Industry Advisory Boards and specifically ensure an explicit role for these Boards in monitoring the continuing industry relevance of programmes.	The university notes that a recent quality review of the School of Biotechnology has led to a review of industry engagement in programme design. The model applied in this School may be of value to the Faculty to consider as part of its own review.
16	P1	A	Explore new initiatives aimed at increasing PhD student numbers in partnership with other Faculties, e.g. the DCU Business School, or nationally and internationally via dual PhD Programmes.	The Faculty Committee for Research (FCR) is addressing this recommendation, and is working to identify new initiatives to increase PhD student numbers. FCR is actively exploring opportunities for new cross-faculty collaborations within the University, and also seeking to identify new strategic external partner institutions, nationally and internationally. There is ongoing liaison with the DCU Research Office to support this activity. It is noted that ongoing investment in research facilities also affects the ability of the Faculty to attract research funding, and thus to attract and support PhD students (cf. Recommendation 11).	The university supports the recommendation to increase student numbers within the faculty and encourages the faculty to explore a broad range of models to support increasing the PhD student population within the faculty.

Recommendation Number	Priority	Addressee	PRG Recommendation	Engineering and Computing Response	University Response
17	P1	A	Develop a policy on feedback of student continuous assessment, including guidelines on the time between submission of work and feedback, suggested max 15 working days, and the quality of the feedback provided.	The Faculty Teaching and Learning Committee (FTLC) will review existing practices and performance in relation to student feedback across the Faculty, with particular regard to the existing University policy on Assessment and Feedback in Teaching and Learning ² . FTLC will bring forward additional local guidelines and policy where appropriate. Based on any recommendations from the review, the faculty will seek to develop and implement a number of cross faculty initiatives to enhance the quality of feedback on assessment to students and class groups.	The university notes the updated policy on assessment and feedback in teaching and learning, and welcomes the Faculty's efforts to embed guidelines reflecting this policy. The university encourages the Faculty to consult with the Teaching Enhancement Unit to support the development of guidelines and consideration of best-practice approaches to assessment feedback.

² <https://www.dcu.ie/sites/default/files/ovpaa/DCU%20Combined%20Policy%20on%20Feedback%20and%20Assessment%20Final.pdf>

3. Summary of the One Year Plan

	PRG Recommendation	Action	Timeline	Responsibility
1	Review and implement, where appropriate, a LEAN approach to streamlining processes within the faculty and interactions with central support units e.g. a simpler implementation of digital sign off on expenses.	Review Faculty internal and University processes, identify prioritised process improvements.	Report to FMB: Sep 2017	Executive Dean
2	Implement an annual staff feedback survey within the faculty, as a means of identifying and progressing ongoing issues raised by staff	Pilot survey implemented at Faculty level. Reviewed at FMB.	Implementation: Jul 2017 Report to FMB: Sep 2017	Faculty Manager
3	Develop a framework to support and appropriately recognise succession planning for Heads of School within the faculty. Additionally, consider the identification and appointment of a recognised Deputy Head role within each school.	Review structures in School of Computing (to coincide with appointment of next Head of School).	Review complete: Apr 2017	Head of School of Computing
4	Convene a working group to identify issues, and plan the implementation of enhancements to the DCU website, addressing in particular structural and usability issues.			
5	Initiate a cross-faculty forum to review and develop an enhanced and coherent Faculty identity, drawing on the experiences of both academic, administrative, technical staff and students.	WG completes report and recommendations for FMB.	WG established: Dec 2016 Report to FMB: Apr 2017	Faculty Manager
6	Develop a framework of partnership between Schools, Faculty and Research Centres, to explore resource sharing in order to maximise the effectiveness of resources within the faculty.	WG convened, reports to FMB, and appropriate co-ordination system put in place.	WG established: Dec 2016 Report to FMB: Apr 2017	ADR

	PRG Recommendation	Action	Timeline	Responsibility
7	In consultation with industry partners, review the INTRA programme across the Faculty to maintain its competitiveness	Review undertaken and completed by FTLC.	Report to FTLC: Jun 2017	ADTL
8	Review of staff induction process, with particular reference to faculty processes, induction content and communication.	In conjunction with HR, required data access and procedures put in place.	Report to FMB: Apr 2017	Faculty Manager
9	Ensure, when implementing the existing policy on staff progression and promotion, that teaching excellence is not overlooked, and criteria are transparent, and appropriately reflect excellence in all areas.	Review by University Academic Promotions Committee.	ongoing	Deputy President
10	Address the Technical staff promotion recommendation [sic] from previous quality review	Review of Technical Staffing complement for FMB.	Review initiated: Oct 2016 Report to FMB: Apr 2017	Executive Dean
11	Review existing equipment/instrumentation and implement a lifecycle funding model.	Determine whether an appropriate lifecycle funding process can be designed and implemented. Report to FMB.	Report to FMB: Apr 2017	Executive Dean
12	Establish appropriate, evidence-based entry requirements across the faculty to match student capability to course demands.	Analysis and modelling tools to be developed and deployed at Faculty and programme levels (integrated with the Guru platform or otherwise).	Application for QPC funding: Nov 2016 Implementation: Jul 2017 Report to FTLC: Oct 2017	ADTL
13	Extend the final year student Expo to include the hosting of prospective students and their parents, as a tool for undergraduate recruitment.	FMEC established. EXPO review completed.	FMEC established: Dec 2016 EXPO review to FMB: Oct 2017	Executive Dean
14	Establish an inclusive and transparent process for retiring existing programmes and initiating new programmes which includes consultation with relevant internal and external stakeholders.	Process document prepared and submitted to FMB.	Report to FMB: Oct 2017	ADTL

	PRG Recommendation	Action	Timeline	Responsibility
15	Develop a co-ordinated Faculty approach to industry interaction to ensure continuing industry relevance of programmes.	Review of operation of IABs completed. Report to FMB on explicit linkage from IABs to programme boards.	Report to FMB: Apr 2017	Executive Dean
16	Explore new initiatives aimed at increasing PhD student numbers in partnership with other Faculties, e.g. the DCU Business School, or nationally and internationally via dual PhD Programmes.	Initiate Faculty Research day: promote as mechanism to develop new cross-Faculty, cross-Institutional collaboration.	Faculty Research Day: Jan 2017 Report to FRC: Apr 2017	ADR
17	Develop a policy on feedback of student continuous assessment, including guidelines on the time between submission of work and feedback, suggested max 15 working days, and the quality of the feedback provided.	FTLC to complete review and disseminate local guidelines and policy where appropriate.	Review completed: Jun 2017 Dissemination: Sep 2017	ADTL

4. Summary of the Three Year Plan

	PRG Recommendation	Action	Timeline	Responsibility
1	Review and implement, where appropriate, a LEAN approach to streamlining processes within the faculty and interactions with central support units e.g. a simpler implementation of digital sign off on expenses.	Implement identified process improvements.	Report to FMB: Jun 2019	Executive Dean
2	Implement an annual staff feedback survey within the faculty, as a means of identifying and progressing ongoing issues raised by staff	Iterate and review by FMB.	Report to FMB: Jun 2018, 2019	Faculty Manager
3	Develop a framework to support and appropriately recognise succession planning for Heads of School within the faculty. Additionally, consider the identification and appointment of a recognised Deputy Head role within each school.	Review School management structures to coincide with new Head appointments.	MME: Mar 2018 EE: Sep 2018	Heads of School (MME, EE)
4	Convene a working group to identify issues, and plan the implementation of enhancements to the DCU website, addressing in particular structural and usability issues.	Engagement between Faculty and DCU Communications and Marketing department to consider future developments in the DCU website	End 2017	Executive Dean
5	Initiate a cross-faculty forum to review and develop an enhanced and coherent Faculty identity, drawing on the experiences of both academic, administrative, technical staff and students.	Annual review by FMB.	FMB Review: Jun 2018, 2019	Faculty Manager
6	Develop a framework of partnership between Schools, Faculty and Research Centres, to explore resource sharing in order to maximise the effectiveness of resources within the faculty.	Annual review by FMB.	FMB Review: Jun 2018, 2019	ADR

	PRG Recommendation	Action	Timeline	Responsibility
7	In consultation with industry partners, review the INTRA programme across the Faculty to maintain its competitiveness	Identified enhancements of INTRA programme to be actioned.	Report to FTLC: Jun 2018	ADTL
8	Review of staff induction process, with particular reference to faculty processes, induction content and communication.	Review of operation by FMB.	FMB review: Jun 2018	Faculty Manager
9	Ensure, when implementing the existing policy on staff progression and promotion, that teaching excellence is not overlooked, and criteria are transparent, and appropriately reflect excellence in all areas.		ongoing	Deputy President
10	Address the Technical staff promotion recommendation [sic] from previous quality review	FEB to progress any agreed strategic changes to Technical Staffing complement (subject to resourcing).	Report to FMB: Oct 2018, Oct 2019	Executive Dean
11	Review existing equipment/instrumentation and implement a lifecycle funding model.	Review of operation by FMB.	FMB review: Jun 2018	Executive Dean
12	Establish appropriate, evidence-based entry requirements across the faculty to match student capability to course demands.	Comprehensive review of entry requirements for all Faculty programmes to be completed.	FTLC approvals completed: Oct 2018	ADTL
13	Extend the final year student Expo to include the hosting of prospective students and their parents, as a tool for undergraduate recruitment.	Implementation of specific enhancements of EXPO impact.	Report to FMB: Oct 2018	Executive Dean
14	Establish an inclusive and transparent process for retiring existing programmes and initiating new programmes which includes consultation with relevant internal and external stakeholders.		[Completed]	

	PRG Recommendation	Action	Timeline	Responsibility
15	Develop a co-ordinated Faculty approach to industry interaction to ensure continuing industry relevance of programmes.		[Completed]	
16	Explore new initiatives aimed at increasing PhD student numbers in partnership with other Faculties, e.g. the DCU Business School, or nationally and internationally via dual PhD Programmes.	Implementation and review of new PhD initiatives.	Review by FRC: Oct 2018, Oct 2019	ADR
17	Develop a policy on feedback of student continuous assessment, including guidelines on the time between submission of work and feedback, suggested max 15 working days, and the quality of the feedback provided.	Ongoing review by FTLC.	Review by FTLC: Oct 2018, Oct 2019	ADTL

5. Appendices

5.1 Quality Committee (for the Self-Assessment Report)

The Co-ordinating Committee

Renaat Verbruggen	School of Computing Chair
Suzanne Little	School of Computing
Pascal Landais	School of Electronic Engineering
Ronan Scaife	School of Electronic Engineering
Bryan McDonald	School of Mechanical and Manufacturing Engineering
Paul Young	School of Mechanical and Manufacturing Engineering
Karen Keating	Faculty Office
Paul Wogan	Faculty Services Committee
Barry McMullin	Executive Dean (ex officio)

5.2 Peer Review Group members

- Prof. Ahmed Al-Shamma'a, Executive Dean, Faculty of Engineering and Technology, Liverpool John Moores University.
- Prof. Eileen Harkin-Jones OBE, Bombardier-Royal Academy of Engineering, Chair in Composites Engineering, University of Ulster
- Mr. Tadhg O'Shea, Vice president of software engineering/development management, Fidelity Investments Ireland
- Mr. Gerard McEvoy, Acting Head of Estates, Dublin City University (Rapporteur)
- Prof. Colette McDonagh, School of Physical Sciences, Dublin City University

5.3 Quality Committee (for the Quality Improvement Plan)

The Co-ordinating Committee

Renaat Verbruggen	School of Computing Chair
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Suzanne Little
Pascal Landais
Ronan Scaife
Bryan McDonald
Paul Young
Karen Keating
Paul Wogan
Barry McMullin

School of Computing
School of Electronic Engineering
School of Electronic Engineering
School of Mechanical and Manufacturing Engineering
School of Mechanical and Manufacturing Engineering
Faculty Office
Faculty Services Committee
Executive Dean (ex officio)

5.4 Prioritised Resource Requirements

Project #	Project Title	Cost Estimate
1	Project to specify, design and implement statistical and modelling tools for ongoing analysis and monitoring, to provide an evidence base for regular evaluation of programme entry requirements, (integrated with the Guru platform or otherwise). Tools to be designed and made available for widest possible University use. (Recommendation 12)	€25,000
2	Project to develop tools/system to support video version of EXPO handbook on annual basis. (Recommendation 13)	€7,500
3	Training in LEAN methodologies for targeted staff. (Recommendation 1)	€5,000