

Quality Enhancement Plan

(Insert name of Unit)

(Insert Date)

FOR COMPLETION BY QEU	
Date of Peer Review visit: 9-11 October 2018	Head of Unit: Prof. Jorge Oliveira
Link to Panel Report published on QEU website: https://www.ucc.ie/en/media/support/qualityenhancementunit/reports/sefs/SchoolofEngineering-PeerReviewPanelReport.pdf	Date QEP considered by Quality Enhancement Committee: 26 th September 2022

Item No	Panel Recommendation	Actions Planned ¹	Responsibility for Action ²	Resource Implications ³	Implementation Schedule ⁴	Effectiveness/Impact ⁵ To be completed as part of follow-up
1	<p>To outline and deliver a clear strategy by:</p> <p>1a- Articulating a vision for the School which would justify investment in the infrastructure and human capital.</p> <p>1b- Developing an Action Plan which addresses and prioritises the actions which are required to deliver on the vision.</p> <p>1c- Outlining a clear road-map for the Strategic Plan which is time-bound, and addresses the business and operational aspects of implementing the Plan.</p>	<p>1a-1c- Development and approval of School's vision, action plan and SMART implementation road-map to be presented to the School Council in early 2020.</p> <p>>Review of School's vision, action plan, implementation road-map and School rules in light of UCC 2022 and SEFS' revised strategic approach.</p>	Head of School & Executive Management Committee	none	<p>2020 -??</p> <p>Stalled due to Covid-19</p> <p>Ac. Year 2022/23</p>	Action lines for the strategy plan were first presented for discussion to a School Council meeting in 2020. However, we went on "covid compensation" mode since then. Notwithstanding, all the School Committees were operationalised and at the last School Council of 21/22 before Summer, each Committee was again tasked with compiling perspectives on the strategy plan fitting the new Strategy Pivot and the Strategic plan of SEFS in particular. During the S1 of 2022

¹ May include actions planned within the unit or those that require interface with other parts of the university

² E.g. Head of School, School Manager, all staff, specific committees etc

³ Resources – the financial or human resources required to implement the recommendation

⁴ Interim milestone dates can be included here (e.g. within 6 months, within 12 months, within 3 years etc.)

⁵**To be completed as part of follow-up 12-15 months post publication of QEP** - Recognising the need to reflect on the effectiveness of actions undertaken, and to what extent the actions have achieved their intended outcome

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	<i>1d- Identifying champions to lead on each of the strategic initiatives identified and aligns administrative roles and functions with delivery of the Plan.</i>	1d- Development of a new school committee structure with devolved and empowered roles at various levels, to enable committees to pursue identified actions, with greater spread of staff intervention and engagement in the plan, and in alignment with UCC 2022 and SEFS and School's own goals.				the SEMC will pick this bottom-up input, consider the strategic targets of each Discipline for the top-down approach, and then elaborate the final plan and present to the School Council for discussion and approval.
2	<i>To overhaul and modernise programmes and curricula to align with state-of-the-art advancements in the fields, reflect the digital transformation of industry, eliminate redundancy, promote gender diversity and deliver on the University's Academic Strategy.</i>	To establish a 5-year Integrated Masters programme in both Engineering and Architecture, conforming with national and international requirements for full professional accreditation; To review and rationalise module offerings across programmes with the purpose of minimising duplication; To establish joint and standardised management of both Work Placement and Masters' Dissertation for all the BE and ME programmes, while maintaining separate module entries. <i>The School has recently established a new EDI Committee and is committed to reviewing the potential impact that the appointment several female academic staff has on the female intake of students as well as</i>	Head of School and Heads of Discipline	Increased teaching loads	Completed	Since the QR we have substantially changed engineering education, as referred in the last update, by introducing an integrated 5-year programme in Engineering, fitting the Bologna agreement model. Most students are taking this option (58% last year, varying between 45% to 90% depending on the specific programme), which creates an additional income stream, as the 5th year pays PG fees. For 22/23 we introduced the option of students coming from a suitable 1st cycle of 3 years in an accredited programme entering directly to 4th year of the ME pathway (this fits EU exchange schemes and international students). In 2021/22 all engineering programmes received the accreditation visit of the Irish professional body regulating the engineering profession. Engineers Ireland, including the 4 new ME programmes. All the 4 BE and 4 new ME received fully positive recommendations for full accreditation for the period of 5 years. There have also been some small modifications to the content of the programmes to respond to industry

		<i>looking at best practice in other institutions in terms of best practice.</i>				
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						interests namely in the areas of data analytics and management.
3	<i>To establish a School Advisory Committee/Industry Board comprising of external stakeholders and alumni to advise on industry trends, strategic direction and programme planning.</i>	To set up an Industry Advisory Committee for Civil, Structural and Environmental Engineering including representatives from relevant industry sectors; To establish an Industry Liaison Committee (including also industry stakeholders) for the whole School so that it can help establishing links with industry, providing a structured forum for industry's input into School's programmes and targets, as well as attracting industry sponsorships.	Head of School, School Industry Liaison Committee	none	2022/23	As referred in the previous report, an Advisory Committee was set up prior to the Covid emergency for Civil Engineering only. As we emerge from those constraints the School's industry liaison committee was operationalised in 2021/22 and industry members will be invited now during S1 of 22/23
4	<i>To consider the discipline mix and the sustainability of each strand to support a five-year programme to the professional standard; identify the specialisms which could be leveraged from that sustainable discipline base.</i>	To standardise and implement 5-year programmes for all the disciplines, while ensuring that all the offered programmes operate with sustainable numbers of students.	Head of School and Heads of Discipline	ideally yes (see text)	2024/25 (if ideal scenario becomes viable)	As mentioned before, this action was very successfully completed regarding the new integrated 5 year ME programmes. Student numbers have been very good in Civil Eng and Process Eng, less so in Electrical Eng although increasing over the years. Energy Engineering has recovered from a very low point to numbers that are still small, which was partly compensated

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						with an Erasmus Mundus programme that brings extra students for 1 semester. The ideal scenario to rationalise our offer would be the introduction of mechanical engineering as a programme option, which would have 3 common years with energy engineering, and diverge only for the final level. We currently already have quite a number of mechanical engineering subjects in fact, including a 1-year taught masters. However, for a proper attraction of extra students we need more resources, namely a chair professor for a minimum of credibility, and also some additional lab equipment for UG one more mech eng lab. This option was being pursued for philanthropic funding before covid kicked in and shelved that option. We will be hoping to resume in the forthcoming academic year.
5	<i>To formalise the School's connections with the various research institutions – in particular Tyndall, ERI, MaREI – to raise the profile of Engineering at UCC, to attract more national and international students, and to enhance the learner experience through access to research-led teaching</i>	To systematically incentivise School staff's alignment with RICU centres' strategic objectives and pursuit of PI status in RICU centres (including Tyndall, MaREI, ERI, Insight, Infant and the CPPU); To revive appointments as Research Professors, as well as establishing the new figure of School Fellows to recognise RICU staff's contributions to the School.	Head of School	none	largely completed	The relationships with the RICUs are very good, while there are no formal arrangements, other than those that individually result from projects done through the RICUs, which is currently a large proportion of projects. At School level we have introduced the School Fellow position, which brings to School Council and the SEMC (1 representative) research fellows from the RICUs that collaborate in the delivery of our educational programmes.

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6	<i>Exploit the opportunities to grow, presented by the market demand for part-time graduate level programmes.</i>	Building upon the increasing popularity of the P-T MEngSc Pharmaceutical and Biopharmaceutical Industry, target Human Capital Initiative funding (Pillar 1 and Pillar 3) to develop both a Higher Diploma and a Masters Programme in Sustainable Futures; To continue to cooperate with MTU in establishing collaborative industry programmes emerging from the Regional Skills Forum-Industry (e.g. a programme in Validation and a programme in Process Safety).	Head of School, Heads of Discipline	increased teaching loads	partially completed	The part-time MEngSc Pharmaceutical and Biopharmaceutical Engineering has progressed and the schedule was modified to now allow for more flexible choices and also to be done in a single year, all at student's choice. The HCI programmes were successfully established (both pillar 1 and 3). There are more options now for growth especially in the Electrical & Electronic Engineering area for the next years
7	<i>Develop an international strategy to include mobility, partnership, staff/faculty exchange, and recruitment to diversify income streams, enrich student/staff experience and competencies, and facilitating benchmarking</i>	To proactively engage with SEFS/International Office's international cooperation initiatives involving EU/non-EU countries (e.g. Greece, China and India); To apply for funding for the Erasmus Mundus Joint Programme on Renewable Energy with three other EU	Head of School, Heads of Discipline	none	partially completed	We have an Erasmus Mundus Master programme in cooperation with EU Universities (in Renewable Marine Energy). We have responded positively to requests from 2 French Institutions for exchange arrangements. We changed the MEngSc Pharmaceutical and Biopharmaceutical Engineering schedule to allow for international students. Special recruitment actions had stalled due to covid, and should resume this year. We are

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		<p>universities (to commence in A.Y. 2021/22);</p> <p>To formalise the student opportunity within all UG programmes to study for a semester/year in US universities;</p> <p>To keep engaging with Erasmus student exchanges, as well as facilitating additional initiatives such as Summer Placements and Final Year projects from other universities;</p> <p>To capitalise on the Engineering chairing of the UCC Latin-American Internationalisation Group to attract increasing numbers of international applications from this area.</p> <p>To pursue, as a School and along with UCC, a student recruitment strategy systematically targeting Middle Eastern countries;</p> <p>To further facilitate staff's sabbatical leave periods abroad.</p>				collaborating with the new international officer of SEFS to promote our programmes
8	<i>To put in place pathways for non-traditional entry routes in line with University targets.</i>		Head of School	none	in place	We currently have no plans to expand the existing schemes. It is possible to enter Engineering to 2nd year having professional certificates. There are also national programmes of support to disadvantaged students and a small quota for such students to enter 1st year

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9	<i>To develop inter-college and cross-college initiatives to link Engineering with other disciplines and to expand the offerings to undergraduate and graduate students.</i>	To continue to build upon existing, RICU-based research collaborations within the College of SEFS, as well as expanding interactions with the College of Medicine and Health via the INFANT Centre's activities and the newly established professorship in Biomedical Engineering; To further intensify reaching out to the other two colleges - CACSSS (already established collaboration Sociology and Geography) and Business & Law. To increase amount of module offerings in Engineering programmes from other units within and outwith SEFS and, in turn, to offer Engineering module to students in other programmes.	Head of School, Heads of Discipline	none	ongoing	Formal interlinks with other academic units has been expanding, especially with the momentum created by the Research Futures Clusters. We have a SL post 50-50 with the School of Microbiology in biochemical engineering, another with the School of BEES in circular economy, and are hoping for more joint appointments with Physics (photonics) and Chemistry, Biochemistry and Pharmacy (pharmaceutical and biopharmaceutical engineering)
10	<i>To explore potential programme collaboration with CIT [now MTU], drawing on the strengths of both institutions.</i>	To build upon previous collaborations with MTU on 2 Certificates for industry staff (Regional Skills Forum) and resume the commenced proposal for a collaborative PG programme with MTU	Head of School	none	2022/23	There is currently no cooperation in the Engineering area. Prior to Covid we were working in a joint graduate school, but discussions have not resumed since Covid. We hope to restart in the coming year

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		(suspended in early 2020 due to the onset of the Covid-19 pandemic).				
11	<i>To recognise the current imbalance in student numbers and urgently address the associated workload distribution, which is unsustainable and inhibiting progress.</i>	To establish a common UG Year 1 and introduce registration quotas for Year 2, in order to balance demand across programmes; To hire additional staff members in the disciplines currently with higher demand (Civil, Structural & Environmental and Process & Chemical).	Head of School, Heads of Discipline	additional staff	completed	Since the QR we have implemented the common 1st year which had a positive impact in recovering a minimum of student interest in Energy Engineering. There has also been a significant strengthening of staff in the Civil and Chemical Eng disciplines that were rather depleted at that time. Some staff contribute to more than one discipline, considering that distribution, we currently have a much better balance and numbers in the various disciplines (except mechanical, which at present does not have an UG programme). Further strengthening is now being pursued with the Futures clusters.
12	<i>12a- To monitor effectiveness of new structures and include empowered student representation. 12b- Student membership and representation on appropriate School committees is critical).</i>	12a- To ensure that staff-student committees are effectively functioning in each discipline. 12b- [To review School rules to ensure student membership and representation is extended to appropriate School committees, in addition to School Assembly and disciplinary staff-student committees.]	Head of School, Heads of Discipline	none	2022/23	All student-staff committees are functioning. A School Assembly, with invited participation of all students, will be implemented from 2022/23
13	<i>13a- To implement an assessment and feedback policy; 13b- To ensure that the School moves to the university VLE, Canvas, for consistency and improved functionality.</i>	13a- To constitute a working group entrusted with devising, piloting and then implementing by the beginning of the academic year 2021/22 a complete school-wide student	Head of School	none	completed	A student feedback system was piloted in the 2nd semester of 2020/21 and then the full system assessing all modules of Engineering was run in 2021/22. The median response rate was 27%, which is not very good, but allowed for a good 1st start. Lecturers were then requested to begin this year with notices of changes

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		feedback system on every module. 13b- To immediately make full use of Canvas' capabilities across the School.				made as a result of the previous feedback, which will hopefully improve student buy-in to the system and thus response rates.
14	<i>To ensure that postgraduate students who are tutoring engage with the CIRTL programmes.</i>	To systematically comply with current School's policy requiring PG demonstrators' successful completion (pass) of SEFS module 'Teaching Pedagogy'/equivalent qualification.	Head of School	Teaching training	completed	This was implemented, at a College level

For completion by Unit

Head of Unit: Jorge Oliveira

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Date: 20th September 2022