University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

QUALITY ENHANCEMENT UNIT

REVIEW PANEL REPORT

SCHOOL OF ENGINEERING

Date: 9th to 11th October 2018

"By embedding a strong quality-enhancement ethos, we will use our quality processes to ensure a culture and experience of best practice in the delivery of our academic mission, demonstrating our commitment to continuous evolution and improvement"

(UCC's Strategic Plan 2017 – 2022, p.23)

Contents

Part 1 - Overall Analysis

1.1 List of Panel Members

Name	Position/Discipline	Institution
Professor Bruno Allard	Director of Ampère Laboratory	INSA Lyon (France)
Ms Jennifer Chadwick [Student Reviewer]	School of Law	University College Cork
Professor Mary Horgan [Panel Chair]	School of Medicine	University College Cork
Professor Per Larsson-Edefors	Professor of Computer Engineering	Chalmers University of Technology (Sweden)
Professor Lisa Looney	Dean of Engineering and Computing	Dublin City University
Ms Michèle Power	Manager, Quercus Scholarship Talented Students Programme	University College Cork
Dr Kay Taaffe *[Secretariat Support]*	*Quality Enhancement Advisor*	*University College Cork*

1.2 Context and Overview

With a history of Engineering at UCC dating back to 1849, the School of Engineering in its current form, was constituted in 2009 and encompasses several disciplines. The School currently delivers four flag-ship undergraduate programmes – one related to each of the disciplines of Civil, Structural and Environmental (CSE); Electrical and Electronic (EE); Energy; and Process and Chemical. In Mechanical Engineering there is a post-graduate Masters programme (see Appendix 2 for a list of all of the programmes at the School). This review comes in the wake of accreditation from Engineers Ireland in 2017 where four undergraduate programmes received accreditation (two programmes for 5 years and two for 3 years).

The School is described in the Self Evaluation Report (SER) as a "school in transition" due to changes in staff profile, school management and operational structures. The School is working towards developing cohesive school-level structures and has put in place "a large number of committees to carry out many of the administrative functions of the School" since the last periodic review[1]. The School is moving towards offering an option for 5-year integrated Masters programmes to enable students to graduate having met the academic requirement of Engineers Ireland for chartered status, with current 4th year Electrical and Electronic Engineering students having that option for the first time this academic year.

It was clear from the meeting with external stakeholders, who hold the School in high regard, that Engineering at UCC is addressing skills needs in key disciplines for enterprise in the region. A significant asset for the School of Engineering is the link to the research centres and institutes, which have strong

[1] School of Engineering Self-Evaluation Report

historical roots in the School. The Panel was of the opinion that these links should be increasingly harnessed to develop a research-led curriculum, and to enhance teaching and learning within the School, thus ensuring that students benefit from the cutting edge research at these internationally recognised institutes. These valuable connections and synergies could, in addition, be leveraged more to enhance the branding and profile of the School regionally, nationally and internationally – the School of Engineering deserves a larger profile, particularly to attract students from a wider base.

1.3 Methodology and Timetable

The Panel met over three days and the timetable enabled comprehensive engagement with staff, students, stakeholders and senior management at School, College and University levels (see Appendix 1 for a copy of the timetable). The composition of the Panel, which included national and European experts, provided good coverage across the disciplines of Engineering. Internal reviewers provided knowledge of the institutional and organisational structures within the University. The Panel commented on the great value of having the involvement of a Student Representative as a full Panel Member and the insightful contributions that this offered. Secretariat support from the Quality Enhancement Unit (QEU) was provided to the Peer Review Panel throughout, to facilitate the conduct of the review and to support the Review Panel in formulating and agreeing the final Panel Report.

1.4 Site Visit

The Site Visit was well-organised, although the schedule was very full and it would have been useful for the Panel to have more time to prepare and deliberate between meetings. The Site Visit took in a tour of the facilities which were located at different sites across the University (Civil Engineering building; Electrical Engineering building; Kane basement; Food Science Building). The Panel was of the opinion that a dedicated meeting with representatives of the associated research institutes (including Tyndall National Institute, ERI [Environmental Research Institute], and MaREI [Centre for Marine & Renewable Energy Ireland]) would have been beneficial, particularly in the light of the significant historical and current links between the School and the Institutes in the domains of research and education. The Panel wishes to thank the staff of the School for their engagement with the review process during the Site Visit.

1.5 Self-Evaluation Process

1.5.1 Self-Evaluation Report, SWOT and benchmarking

The Self-Evaluation Report (SER) was presented as a composite of five different disciplinary reports, with an overview from the School. Thus the methodology was fragmented and siloed, rather than School-wide. This led to the narrative in the report being repetitive in much of the document.

In general, the focus of the SER within the School was limited in its scope, being more regional and Cork-facing than nationally or internationally oriented. In undertaking the self-evaluation process, the School missed an opportunity to be more ambitious in its vision and in terms of articulating a high-level strategy for the long-term sustainability of the School at a national and international level.

While considerable data on student progression was presented, the SER lacked reflection on the implications of this data. Processes for communication with students, student representation on School Committees, and student supports within the School were not evidenced in the Self Evaluation Report. It is most important that students have representation within the new School committee structures that are being rolled out at the School.

The SWOT analysis was the primary means of staff engagement with the review process, and it was evident that communication across the School is improving. The SWOT report, outlined in Appendix 6, was detailed. The Panel was of the opinion that the School could increasingly leverage the affiliated

research Institutes as a strength, and formalise relationships with industry, which, while strong, remain informal.

The approach to benchmarking varied across the disciplines; the benchmarking against Sheffield was detailed and identified some potential learning – not least the importance of attracting international students. The Panel was of the opinion that the School needs to look beyond Ireland and the UK, and would greatly benefit from benchmarking internationally with institutions in Europe and the US.

The report would have benefitted from metrics in areas such as publications and research funding to support the School's statements on "research successes" and "strong research profile".

1.5.2 Developments since last review

Some progress has been made in recent years in relation to the integration of School structures, however this remains a work in progress and there is a considerable way to go in terms of developing a cohesive School. The recent appointment of a School Manager should assist in enabling this process.

1.6 Good Practice Case Study

The Panel commended the Good Practice Case Study (which related to the MEngSc in Pharmaceutical & Biopharmaceutical Engineering) as an example of a market-oriented programme, which is responsive to industry needs, and, through flexible delivery, enables people in the work place to upskill and avail of Continuous Professional Development.

1.7 General Commendations

The Panel found that the core education received by students is viewed as being theoretically and foundationally robust. The research institutes/centres underpinned by the School are of national and international significance. It is commendable that the School is addressing skills needs in key disciplines for enterprise in the region; alumni spoke with pride of their association with UCC and the qualification is held in high regard by employers.

The clear engagement in the enhancement of Learning and Teaching and related professional development, particularly in the area of the Process and Chemical Engineering, is notable. The initiative shown under the leadership of the Head of School to begin the process of revising and developing the School's curriculum and programme offerings is commendable.

Part 2 – Findings of the Panel

2.1 School Overview

2.1.1 Mission, vision, aims and objectives

Since the formation of the School of Engineering in 2009, the School has undergone a difficult transitionary period. It is clear that the School has yet to reach a cohesive, coherent state, although considerable effort has been expended towards that goal under current leadership. For the School to remain current and competitive, it is imperative that a common, shared vision for the whole School is developed, and there needs to be an urgency and momentum to achieve this. There is, now, an opportunity for the School to come together to articulate a vision which would justify investment in infrastructure and human resources. The Panel recommends that the School develops a Strategic Plan for the whole School which addresses short, medium and long-term goals and priorities, and outlines a clear road-map to achieve these.

The School currently appears to be reliant on leveraging its undergraduate cohorts to fund future development – in particular the development of the 5 year integrated Masters programmes. In its Strategic Plan, the School should also look to other fundraising and income streams (such as support from industrial partners, alumni networks etc.) to realise its capital infrastructure objectives. The Business Plan, which should be developed as part of the Strategic Plan, should identify potential income streams from increasing undergraduate cohorts (to include internationalisation), expanding postgraduate educational offerings, research, industry and philanthropy.

In the context of local competition – the proposal for a Mechanical Engineering undergraduate programme is unlikely to solve any existing problems. The Panel believes that the emphasis placed on a Mechanical Engineering undergraduate programme, which would require enormous additional investment, is unlikely to resolve challenges pertaining to student numbers at the School and may in fact further dilute existing resources. The Panel was of the opinion that the School needs to focus on the strengths of their existing strong programmes, research, and teaching and learning.

The Panel is of the view that the support of the College is critical to the development of the School's strategy, in terms of supporting cross- and inter-College initiatives to expand the School's educational ambition to grow numbers and capacity, and to provide the resources and infrastructure to ensure that Engineering at UCC is current and competitive on an international stage.

2.1.2 Unit details – staff and student profile

While the staff/student ratio for the whole School appears appropriate, there is currently an identified issue with unbalanced workload distribution across disciplines, as a result of some programmes being more heavily subscribed than others. In particular, the Process & Chemical Engineering discipline is under-resourced from a staffing perspective. The current workload allocation model does not appear to be transparent and should be examined. The imbalance in student numbers and the related workload allocation should be considered high-priority as part of the School's Strategic Plan. The proposal to address this imbalance by limiting the places in programmes that are popular with students, and that address the need of local, national and international industry, may curtail the ambitions of these programmes.

There is inefficiency in having technical and administrative staff over four sites. The school needs to consider role descriptions and see how to optimise the effectiveness of its current resources in order that these staff function well as a School team. There should be cross discipline support and knowledge of the running of the School rather than knowledge of running the disciplines.

2.1.3 Unit organisation & planning

The Panel acknowledges the work that has been done over the past year in the development of School Rules, and concurs with the need for effective School-level committees that transcend disciplinary boundaries and disciplinary interests. It will be critical that the effectiveness of these new management structures is evaluated and monitored, and that there is an opportunity for leadership, agency and agility to champion and effect required changes and innovation within the School. In that regard, the Panel recommends that the School looks externally, through engagement with industry and the private sector, and benchmarks against other institutions nationally and internationally. The Panel strongly recommends that the School establishes an independent School Advisory Committee to support and advise the School on its strategy and direction. This Advisory Committee should comprise of, for example, former alumni, representatives of local and national industry, multinational companies, employers etc.

2.2 Academic Standards

2.2.1 Student "life-cycle"

It is evident from the data provided, that student progression and completion rates are typically very strong. A key issue for the School remains the need to increase its undergraduate cohort. The School currently appears to be heavily reliant on the local catchment area – and in particular, certain schools within the region; to that end, the School should develop a recruitment policy which promotes the programmes and graduate opportunities, targets other schools in the region, capitalises on the international market, and seeks to address the gender balance within the School. In doing so, the School should consider expanding its programme offerings within its current disciplines, to include structures such as 3 + 2; utilising majors to address disciplinary areas that are under-represented. In addition, consider collaborative programmes across Colleges such as Business and Engineering; and within the SEFS (School of Science, Engineering and Food Science) e.g. Computer Science/Maths with Engineering.

The extension to the 5-year integrated Masters programmes presents an opportunity for the School in terms of expanding its student numbers. While this is an attractive proposition, it may be prohibitively costly for some students. How this will be promoted and marketed needs to be carefully considered and a recruitment plan put in place to attract students. Diversity in what is offered in the courses, in line with modern workplace needs, should be incorporated in the new programmes

2.2.2 Programme delivery and curriculum planning

The programmes delivered by the school are listed in Appendix 2. Academic standards are underpinned by external accreditation by Engineers Ireland and the Panel was satisfied that the School is compliant in terms of the provision being located correctly on the National Framework of Qualifications (NFQ).

Notwithstanding this external accreditation, the rate of change in Engineering and learning technologies is rapid and it is critical that the School remains current in relation to both. The School should update its practices to reflect the University's current thinking and principles as outlined in the recently adopted Academic Strategy. The School should modernise its programmes and curricula by, for example: developing students' entrepreneurial skills and innovation linking them to national and international presentation opportunities; ensuring that technological skills meet industry standards; increasing community/industry engagement; foster active student learning behaviours from the earliest stages of the programmes; incorporating research-led teaching.

The introduction of a new University-wide VLE (Virtual Learning Environment) provides an opportunity for the School to embrace best practice in the use of new learning technologies and to facilitate feedback, assessment, student communications etc. It will be essential that staff become familiar with this system and that the whole School moves to the common university VLE and abandons the in-house system, which is largely just a repository.

2.2.3 School communication structures

The new School committee structure is underway and will take time to effect. There does not appear to be any student representation/student voice on these committees and this should be addressed in line with the University's practice of promoting student engagement and representation.

The Panel welcomes the appointment of a new School Manager which will enable increased cross-School communication and provide an opportunity to adopt new structures to support the initiatives that are essential to modernising the School.

2.3 Student Learning Experience

2.2.4 Teaching and learning

The Panel observed some good exemplars of teaching practice and a commitment to professional development amongst some staff. There appears to be a disconnect between research and teaching, which is a missed opportunity given the links to the research centres. With changing learning environments, staff need to remain current in the areas of Teaching & Learning and staff should be encouraged to engage with programmes offered by CIRTL[2]. In addition, postgraduates engaged in tutoring must engage in the programmes offered by CIRTL and this should be required and facilitated by the School. The University needs to address the barriers which prevent researchers in the research centres and institutes from engaging in lecturing within the School; a way needs to be found to enable more fluid movement of staff between the centres and the School, in the interests of students. This is a priority for the School for the reasons already outlined.

2.2.5 Assessment

The School needs to implement a School-wide policy in relation to assessment, which specifically addresses Principle 3 of the University's Academic Strategy: "*Assessment practices will be effectively aligned with learning outcomes*". This policy should focus on programme level approaches (as opposed to module by module), addressing the student workload distribution; the balance between continuous assessment and final exams; and improved communications to students around processes, dates, schedules etc. A critical issue for students was the delay in getting feedback on continuous assessment. There needs to be consistent oversight of assessment processes at programme level to ensure fairness and transparency; students reported that, in some instances, they don't get feedback until they receive their overall module mark – in the form of a grade – thus missing the opportunity for learning through formative feedback. A policy on timely feedback to students should be implemented to support student learning through formative feedback. The School should engage with CIRTL to implement progressive approaches to assessment and feedback which can embed learner behaviours from 1st year, with increased competency developing across the duration of the programme.

2.2.6 Learning resources

The physical resources and facilities across the School varied considerably. In general, it was found that the spending for teaching equipment renewal is very low, given the breadth of disciplines and dependence on laboratories. The Electrical Engineering building was refurbished and fit for purpose with good resources, computer labs and facilities. The facilities and labs for Process and Chemical, however, are poorly configured and not optimum, and in need of investment. The Panel had some concern around the overall footprint of the Civil Engineering building – although the innovation studio is a very pleasant space and it being re-purposed for student centred learning is a very positive development.

It was noted that some spaces were currently closed due to health and safety concerns. In relation to the physical spaces and equipment use, a collaborative approach by the School and Central units to risk management and to health and safety, which is rigorous but focused on delivering the mission, would better enable the School to deliver innovative high quality teaching.

It became evident that staff resources for programme delivery are unevenly distributed in the context of student numbers. There is a need for a strategic review of the part time pay budget, which could provide possibilities to address the staffing issue in Process and Chemical Engineering as well as resources for equipment, course development etc.

[2] Centre for the Integration of Research, Teaching & Learning

2.2.7 Student support

Students commended the many excellent lecturers in the School, stating "they are not just lecturers – they are real teachers". They spoke highly of their experience of work placement, which most saw as a highlight of their programme, but some felt that the 3-month placement for Civil Engineering was too short. Students considered that there were aspects of the programmes that need updating to equip them with appropriate skills for the modern workplace. The Panel's view was that there are opportunities for students to further engage externally to promote their work on a national and international stage, and to receive acknowledgement for their achievements through competitions and community engagement etc.

In relation to student support and tutorials/labs, students thought that this was compromised in the area of Process and Chemical, due to the increased numbers taking the programme. This underlines the understaffing issues already mentioned.

The structures for student feedback and staff-student representative committees were unclear and seemed to be more effective in some disciplines than others. It is critical that there is appropriate student representation in the new committee structures of the School and opportunity for the student voice to be heard. The School needs to implement a School-wide process and information loop, to facilitate student representation and follow-up.

2.2.8 Graduate and Postgraduate Opportunities

The Panel saw considerable opportunity for increasing the links between the research centres/ institutions and the School, through leveraging support for undergraduate students from post-graduate students and staff at these centres. Post-graduate students and post-doctoral staff can be effectively employed to strengthen and develop associations and networks between undergraduate, graduate students and academic staff. The College and University should work with the School to address the barriers which currently impede staff at the research institutes from teaching at the School.

2.2.9 External links and community engagement

It is evident that the School enjoys considerable goodwill from alumni and industry, and provides a valuable service in terms of addressing skills needs for local industry. External stakeholders expressed the opinion that the School should look at what the region needs, and rather than focusing on competing providers, should instead refine their own specialisations to become a centre of excellence, with a world-leading reputation. The Panel was of the opinion that the School needs to capitalise more on this loyalty and reputation to advance its educational and resource ambitions. It is essential that the School becomes more outwardly-facing in terms of engaging with industry to anticipate future needs, and to form potential partnerships, both regionally, nationally and internationally in areas where they currently excel.

The Panel strongly recommends that the School formalises its relationships with industry through the formation of a School Advisory Committee/Industry Board, whose members should include alumni, employers, entrepreneurs, innovators and researchers etc. from within *and outside* the region, to advise on strategic direction and industry trends, and to champion and promote the work of the School.

2.4 Staff

2.4.1 Staff Profile

The School of Engineering has a total of 56 staff of which 33 comprise academic staff. Since 2016, there have been a number of lecturer and professorial appointments, with vacancies in three Chairs at present, including a newly endowed Eli Lilly Professorship in Biopharmaceutical Engineering.

Academic staff at the School of Engineering are engaged in research at MaREI and Tyndall. The number of staff is overall commensurate with the student numbers, but it is not clear that sufficient scale exists to sustain the number of separate disciplines identified internally by the School. When resources are spread across disparate programmes, even small jumps in student numbers can leave one area over-burdened. The Panel welcomed the opportunity presented for further integration across the School by the recent appointment of a School Manager.

2.4.2 Staff Development Objectives

A key issue for the School will be mainstreaming the emphasis on developing further teaching and learning competencies within all disciplines, to ensure that changes in curriculum, learning technologies and assessment, as outlined in the University's Academic Strategy, will be effectively employed across the School.

In line with the School's Strategic Plan, it will be necessary to identify and support champions with different areas of expertise – areas such as internationalisation, community engagement, marketing etc. – to lead on the strategic initiatives identified. This will offer leadership opportunities for Faculty with clear accountability for priority actions.

2.4.3 Staff Communication

It has already been noted that new School structures and School Rules have been put in place, through a highly democratic process. It is hoped that the outcome of these processes will be to enhance staff communication and effective decision-making across the School given the time commitment this has been given over the past two years.

2.5 Collaborative partnerships

The School has demonstrated its ability to be flexible and responsive to industry needs through its MEngSc in Pharmaceutical & Biopharmaceutical Engineering programme. The School has many opportunities to consider partnerships, through joint programmes nationally and internationally. The School should also consider flexible options for international partnerships, especially with the integrated Masters programmes – through, for example, 3 + 2. Assuring academic quality in such programmes is a challenge, and the School should align with best practice in undertaking due diligence in all cases. In line with educational and industry needs, the School should explore joint partnerships with CIT, exploiting the strengths of both institutions.

Part 3: Recommendations

3.1 Recommendations to the School

The Panel Recommends that the School:

1. Outlines and delivers a clear strategy by:
   - Articulating a vision for the School which would justify investment in the infrastructure and human capital.
   - Developing a Strategic Plan which addresses and prioritises the actions which are required to deliver on the vision.
   - Outlining a clear road-map for the Strategic Plan which is time-bound, and addresses the business and operational aspects of implementing the Plan.
   - Identifying champions to lead on each of the strategic initiatives identified and aligns administrative roles and functions with delivery of the Plan.

Within that context:

2. Overhaul and modernise programmes and curricula to align with state of the art advancements in the fields, and to reflect the digital transformation of industry, eliminate redundancy, promote gender diversity and deliver on the University's Academic Strategy
3. Establish a School Advisory Committee/Industry Board comprising of external stakeholders and alumni to advise on industry trends, strategic direction and programme planning
4. 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
5. 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
6. Exploit the opportunities to grow, presented by the market demand for part-time graduate level programmes
7. 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
8. Put in place pathways for non-traditional entry routes in line with University targets
9. Develop inter-college and cross-college initiatives to link Engineering with other disciplines and to expand the offerings to undergraduate and graduate students
10. Explore potential programme collaboration with CIT, drawing on the strengths of both institutions.
11. Recognise that the current imbalance in student numbers and urgently address the associated workload distribution, which is unsustainable and inhibiting progress
12. Monitor effectiveness of new structures and include empowered student representation. Student membership and representation on appropriate School committees is critical.
13. Implement an assessment and feedback policy; ensure that the School moves to the university VLE, Canvas, for consistency and improved functionality
14. Ensure that postgraduate students who are tutoring engage with the CIRTL programmes

3.2 Recommendations to the College

The Panel Recommends that the College:

1. Progresses inter-college projects involving the School of Engineering

2. Supports an ambitious plan for the School of Engineering and its further integration within the College to remain relevant and competitive, and to enhance learning, teaching and research

3.3 Recommendations to the University

The Panel recommends that the University:

1. Supports the School to develop an ambitious vision for Engineering at UCC and its associated research institutes
2. Supports interdisciplinary collaboration across Colleges
3. Addresses the barriers which impede researchers in the research institutes from teaching in the School

Appendix 1 Timetable

PEER REVIEW PANEL SITE VISIT

Tuesday 9 October 2018	
12.00 – 13.30	Convening of Panel members. Briefing by Director of Quality Enhancement and Quality Enhancement Advisor, followed by lunch.
13.30 – 14.30	Private meeting of Panel *Panel agree issues to be explored in meetings with Head of School, School staff and Stakeholders.*
14.30 – 15.30	Meeting with Head, School of Engineering (to be joined by the School Manager at 15.10) *Discussion regarding developments to date, strategic priorities of the School and overview of educational provision.*
15.30 – 15.50	Tea/coffee
16.00 – 16.50	Meeting with School staff *Discuss issues such as strategy, communications, research & education, staffing, teaching & learning, curriculum & assessment.*
17.00 – 18.00	Meeting with Stakeholders *The Panel meets with past graduates, employers of graduates and other stakeholders as appropriate to discuss views on the quality of education received and the graduate attributes. Representatives include:* Representative from ARUP Representative from Evolusion Representative from Jacobs Engineering Representative from Malachy Walsh & Partners Past Graduate Representative from PM Group Qualcomm - 3 x representatives
19.00	Informal dinner for members of the Panel & staff members of the School

Wednesday 10 October 2018	
09.00 – 09.15	Convening of the Panel
09.15 – 10.15	Enhancing Student Learning Experience *Opportunity for the School to showcase good practice and enhancements to the student learning experience (e.g. student feedback, staff development, graduate outcomes).*
10.15 – 10.45	Tea/coffee
10.45 – 11.30	Meeting with Undergraduate students 1st and 2nd year students 1st Year – General – 2 x student representatives 3rd and 4th year students Civil, Structural & Environmental – 2 x student representatives Electrical & Electronic– 2 x student representatives Energy Process & Chemical
11.30 – 12.30	Meeting with Head of College (to be joined by the College Financial Analyst at 12.00) *Panel discuss College strategy and priorities. The links between College/School financial resource allocations process, staffing resources and infrastructure.*
12.30 – 13.00	Representatives of Postgraduate students MEngSc (Mechanical) PhD student (Tyndall) PhD student (Electrical & Electronic) PhD student (Energy) PhD (Energy - ERI) MEngSc (Sustainable Energy) Taught Masters PhD (Civil) MEngSc (Mechanical) PhD (ERI)
13.00 – 13.45	Lunch and private meeting of the Panel
13.45 – 14.45	Tour of School facilities (Civil Engineering Building; Electrical Engineering Building; Kane basement; Food Building)

14.45 – 15.45	Meeting with Programme Directors/Chairs of Boards of Studies for the following: Energy UG Civil UG; Integrated ME Civil UG; Director MaREI Energy UG and MEngSc in Sustainable Energy Electrical UG MEngSc Bio Pharma MEngSc Electrical MEngSc Mechanical Programme Director Process & Chemical UG Process & Chemical UG 1st Year UG Coordinator *Discussion on monitoring and review of programmes to include indicatively, student progression, assessment, External Examiner reports, external accreditation/ recognition (where appropriate), supports for learners, placement (where appropriate).*
15.45 – 16.15	Tea/coffee
16.15 – 16.45	Meeting with Senior Officers of the University: Director of Research Support Services, Office of the Vice President for Research and Innovation Administrative Co-Director, Centre for the Integration of Research, Teaching and Learning (CIRTL)
16.45 -17.30	Meeting with Deputy President & Registrar *Discussion of University Academic Strategy*
19.00	Working private dinner for members of the Panel to commence drafting the report.

Thursday 11 October 2018	
08.45 – 09.00	Convening of the Panel
09.00 – 10.00	Meeting with Head of School of Engineering *Clarification and discussions of main findings by Panel.*
10.00 – 10.30	Tea/coffee and private meeting of Panel
10.30 – 11.00	Closing presentation *Closing presentation to all staff, to be made by the Chair or other member(s) of Panel as agreed, summarising the principal findings of the Panel. This presentation is <u>not</u> for discussion at this time.*
11.00 – 15.00	Further work on drafting the final report (lunch)

Appendix 2 Programmes Delivered by the School

Undergraduate Programmes

BE Civil Structural and Environmental Engineering
BE Electrical and Electronic Engineering
BE Energy Engineering
BE Process and Chemical Engineering

Postgraduate Programmes

MEngSc Mechanical Engineering (Manufacturing Process and Automation Systems)
MEngSc Electrical and Electronic Engineering
MEngSc Pharmaceutical and Biopharmaceutical Engineering
MEngSc Sustainable Energy