ULSTER UNIVERSITY

REPORT OF A MEETING OF THE REVALIDATION PANEL FOR UNIT 10B4 ENGINEERING, NORTH WEST REGIONAL COLLEGE (NWRC)

9 January 2019

PRESENT: Dr Mary Boyd, Associate Head of Department of Management, Leadership and Marketing, Ulster University Business School (Chair)
Dr Arfan Ghani, Senior Lecturer, School of Computing, Electronics & Maths, Coventry University
Dr Martin Glavin, Senior Lecturer, Department of Engineering & Informatics Electrical & Electronic Engineering, NUI Galway
Mr Pearse O'Gorman, Lecturer, School of Engineering, Ulster University
Ms Ursula Quinn, Senior Lecturer, Department of Hospitality and Tourism Management, Ulster University
Mr Kelvin Connolly, NWRC Student Representative (Year 3 Part-time Software Development)

IN ATTENDANCE: Mrs Maeve Paris, Faculty Partnership Manager, School of Computing, Engineering and the Built Environment, Ulster University
Ms D Troy, Academic Policy and Standards Officer, Academic Office, Ulster University

1 BACKGROUND/INTRODUCTION

The panel was convened to consider the following provision offered at the Strand Road campus.

- FdEng Mechanical Engineering (with CertHE exit award) (FT/PT)
- FdEng Electrical and Electronic Engineering (with CertHE exit award) (FT/PT)

Both courses are delivered full-time and part-time by North West Regional College at its Strand Road campus. All modules at Levels 4 and 5 are 20 credit points and are compulsory, with the exception of the Level 5 Work Based Learning module which is 40 credit points. A CertHE exit award is available in both courses for students who exit early having successfully completed 120 credit points at Level 4.

2 DOCUMENTATION

The Panel received the following documentation:

1. Course submission;
2. Guidelines for Evaluation and Revalidation Panels;
3. QAA subject benchmark statements for Foundation Degree Characteristics (2015); Engineering (2015);
4. Preliminary comments from Faculty Partnership Manager;
5. Preliminary comments from Panel members.

3 MEETING WITH SENIOR MANAGEMENT TEAM

The Panel met with representatives from the College senior management team, Ms Dorothy McElwee, Mr Danny Laverty, Mr Michael Melaugh and Mr Paul Young.

3.1 Recruitment, retention and attrition

The Senior Team confirmed the minimum intakes as 15 students for each course, in line with University guidelines, however, indicated that recruitment for the electrical and electronic engineering course in particular was an ongoing challenge and there had been no intake this academic year. The Senior Team advised that part-time cohorts were currently comprised entirely of HLA students. They informed the Panel that even though numbers were small, success rates on both courses were good.

Having enquired about HNC numbers in the same areas, the Senior Team advised that they currently had 40 Mechanical Engineering students enrolled, and an overall total of 100 students at Level 3.

The Panel asked if any specific processes were being put in place to improve recruitment, retention and attrition. The Senior Team advised that a Retention Working Group, covering all courses, operated within the College. A wide range of support was readily available to students and for those experiencing difficulties either academically or personally. The Maths Centre, located with the Careers Centre, provided support and help to students experiencing difficulties in this area – the Centre was resourced for 60 hours per week with a timetabled maths tutor. Year tutors and other interventions including progress coaches were in place to proactively support and retain students.

When asked, the Team advised that no formal structure was in place in relation to peer support and mentoring, however, second year students would provide a talk to first year's in relation to their experiences of work based learning.

3.2 HNC and FdEng

The Panel enquired if there was any competition between the HNC and the Foundation degree programmes and was advised that an element of competition did exist. A customised apprenticeship, equivalent to two A Levels was in place with one key employer. The College and the Course Team did, however, proactively promote the FdEng provision and noted that the increase in unconditional offers by universities had been a recruitment challenge.

3.3 Course promotion and differentiation

The Panel asked for the Team's view on how the FdEng courses should be promoted and was advised that they endeavoured to differentiate the two offerings to prospective students. They worked closely with schools, Ulster University and the larger employers in this regard. They also planned to enhance their own internal marketing. Social events and information evenings were held in the College to promote the foundation degrees.

The Panel asked the Team to set out exactly what differentiated the FdEng from the HNC and was advised that the key differences were the level, number of credit points and the work based learning element. The assessment methodologies in the FdEng were also different and required students to have more analytical and design skills. The Panel stated that it was essential to set out a clear message to prospective students and employers to differentiate between the two courses and to promote the latter.

Returning to the fact that the Electrical and Electronic Engineering (EEE) programme had not recruited this year, the Panel enquired why. The Team set out the challenges that this subject was experiencing across the sector, not only at NWRC. Considerable work had been undertaken with schools and consultants within the College's Business Support Centre were developing linkages with employers.

In light of discussions and what was being presented, the Panel noted that the viability of the entire offering was coming into question. They stated that the programmes seemed very out-dated and old-fashioned in terms of contemporary technologies and terminology. It was essential that this was not reflected in the marketing and promotion material as the courses would not be attractive to students – currency of content was key. The Senior Team advised that the Course Team was very proactive and enthusiastic in promoting the provision but also pointed out that the core subject content also needed to be present.

3.4 Entry Qualifications

The Senior Team advised the Panel that they had adjusted the entry standard, including a lower maths requirement, for part-time students compared to full-time. The rationale for this had been on advice from the University on grounds of viability and that the part-time programme was undertaken over a longer period of time.

The part-time student profile currently comprised only of the HLA. The Panel advised that the Team could attract other types of apprenticeships from employers and that this could prove useful in increasing numbers going forward. The Team stated that they would seek feedback from students and employers in this regard.

3.5 Curriculum Design

The Panel asked what engagement with employers had taken place during the curriculum design process and was advised that the regular course review meetings had involved employer representation. Feedback from employers and other stakeholders had to some extent informed the course content. The Advanced Manufacturing Forum, of which the College was involved, also provided a channel through which feedback could be facilitated.

3.6 Work Based Learning

The Panel enquired as to the existing pool of placement providers and was advised that this discussion would be better covered by the Course Team, however, a wide range of employers across the region provided placement opportunities for students. There had never been any issue with placing students.

3.7 Staff Resources

The Panel noted concern in relation to the qualifications of two members of staff teaching on the course but one in particular whose highest engineering qualification was a Level 3 HNC. This did not meet the requirements for teaching at Level 5 which was a degree level qualification and they should be neither delivering the course nor assessing. Following discussion and clarification, the Senior Team informed the Panel that this individual had now stepped off the programme.

3.8 Staff Development

The Senior Team advised that an annual staff development plan was in place within the Department and staff were also able to come forward with any additional staff development

needs. The formal staff appraisal process also identified development needs. A number of fusion projects were ongoing and staff also attended University events.

4 MEETING WITH STUDENTS

The Panel met with a representative group of twelve students from across both programmes. During discussions, the following was noted.

- Students were reasonably confident in their employability and some had already secured posts for when they graduated, as a result of their work based learning.
- Students had chosen to undertake a FdEng for a number of different reasons including to provide progression to an Ulster or other university degree course; the cost; location; the step from A Level was less that straight to Level 6 and it allowed them to get more experience in the area before progressing further; progressed from a Level 3 course at the College.
- They would 'sell' a Foundation degree to others was that it provided as it stated, a good foundation; it was beneficial to anyone in employment who wanted to upskill; it was an easier introduction to higher education for those who had been out of education for some time.
- No issues were raised in relation to the level of support provided to both full-time and part-time students.
- The view was that anyone without Maths at 'A' Level may find the programmes quite difficult as the maths content was considerable step up from GCSE. Additional Maths support was readily available to all students who needed it.
- Students had not been directly involved in the development of the new revised programmes, however, mechanisms were in place to provide feedback, for example, through student representatives and the Staff/Student Consultative process.
- No-one had seen the new revised programmes but noted that at least one electrical module would be useful in the Mechanical Engineering course, as well as more robotics content.
- There were no issues in relation to access to resources except for MultiSIM which could only be accessed on-campus, however, students recognised why this had to be this way.
- Timetabling in year 1 was noted as an issue and that full-time hours were put into two long days to accommodate co-teaching with part-time students. The preference would have been to have had the content spread out over the week.
- There was a lot of assessment to be submitted prior to Christmas in year 1 and a more staggered approach would be welcomed.
- A year 2 peer mentor scheme would be welcomed by first year students.
- HLA students provided details of how their working/study pattern operated. They averaged 42 hours per week and a full day study (9 am to 5 pm) on top of this. Employers were very supportive.
- The relationships between employers and the College were very good.
- The students had at least one visit during placement.
- Students had been generally personally responsible for sourcing their own placement but lecturers had provided some contacts. The appropriateness of a placement was checked and monitored by lecturers.
- Students were provided with guidance on CV preparation and students who had already undertaken work based learning gave a talk to first year students in relation to their own experiences.
- Guest lecturers were not provided to students but all students were taken on a site visit to a power plant.
- Students had a relatively clear view of the difference between the HNC and the FdEng courses but noted that many employers did not.
- The placement was a unique selling point of the FdEng.

- Students did not undertake a project per se but provided details of other tasks and assessments that they undertook. The Panel noted that it was important that students were provided with opportunities within their course to be able to be confident in demonstrating their knowledge and skills to employers and their ability to put this into practice in the workplace. The ability to demonstrate competence prior to going out on placement was essential and this would also potentially enable students to apply for and gain better placements. The inclusion of more project type assessments within the curriculum would nurture students and improve their confidence and enthusiasm for engineering. The students saw this as a very valid point.

The Panel thanked the students for participating in the revalidation and wished them well for the future.

5 MEETING WITH COURSE TEAMS

5 .1 Background and revalidation

The Panel asked the Course Team to provide details of where these courses fitted within overall College provision and was advised that it sat within the Department of Science, Technology and Creative Industries. The Team had considerable experience in the delivery of higher education courses as well as excellent qualifications and industry experience.

When asked about their approach to the revalidation, the Course Team explained that revisions to the curriculum had been informed and influenced by internal and external feedback from current and former students, employers, colleagues at Ulster University. The Curriculum Design Principles had influenced module redesign in relation to the move from 15 to 20 credit point modules and a reduction in the number of assessments. All staff had also attended the University's revalidation briefing session. Student views had been the greatest influence although the Team had not directly involved students in course redesign.

5.2 Assessment and Feedback

As part of the revalidation process, the overall assessment strategy had been reviewed to include a reduction in the number of module learning outcomes. The Team had met regularly and discussed the balance of assessments (coursework and examination) and submission dates to ensure that there was no 'bunching' at certain time (an issue which the Panel had noted during discussions with students). New types of assessment had also been introduced and examples were provided. The Course Team advised that they did not currently use electronic submission of assessment or provide feedback electronically. The Panel advised that this was now an expectation and should be progressed.

Group work was used in assessment but students were always required to submit an individual piece of work and awarded an individual mark.

The Panel noted that there was no project in either course – the Team informed the Panel that a project was a requirement in the Work Based Learning module as well as other 'mini' projects undertaken in other modules. The Panel was of the view that, as discussed with the students, a project would give students the opportunity to build confidence and enthusiasm in the field of engineering and to demonstrate their skills to a wide range of potential employers.

5.3 Graduate Qualities

The Panel asked the Course Team what qualities and attributes a graduate of these programmes would have and was advised that it was the ability to take a logical and structured approach to problem solving. When asked how this was being assessed, the Team provided

some examples including the design of a piece of software where students were expected to follow a design process. Graduate attributes were not clear from the information presented in the documentation.

5.4 Work Based Learning

The Panel enquired how work based learning operated in practice, including how placements were sourced and vetted. The Course Team advised that they relied heavily on two companies for the majority of placements. Opportunities were sourced by students and formally vetted by the College. It was the expectation that having completed first year of the programmes prior to placement, that students would be in a position to contribute to the organisation in a meaningful way. Employers to date were very pleased with the placement students and had in many cases offered permanent posts following graduation. Some had also agreed to support students with further degree level study.

Weekly work logs were prepared for all placements and staff undertook three visits during the placement period. Assessment of the actual placement project was queried as this was not set out in the module description (page 166/7 of the course document). It was essential that the module was revised using the academic assessment template already provided by the Faculty Partnership Manager. The Course Team noted the challenges with the project element when working with large production based organisations. The Panel stated that an inherent flexibility for the work based learning project could be built in but it was essential that all the learning outcomes were met and assessed.

The Panel pointed out that a fundamental characteristic of all foundation degrees was the academic and vocational project in the work based learning element. It was essential that this provision fully aligned with those characteristics.

Overall, the College enjoyed good relationships with work placement providers and their feedback helped to inform and develop the course content.

5.5 HNC and Foundation degree

The Panel asked the Course Team to set out what differentiated the FdEng programmes from the HNC. The Team stated that it was the level of the qualification, the additional content and knowledge and additional transferable skills gained in the FdEng which differentiated it. Furthermore, the HNC was all coursework based whereas the FdEng was assessed by coursework and examination and also included a period of work based learning. It also prepared students for degree level study.

Much discussion followed around the importance of differentiating between the two programmes and highlighting what a prospective student would gain by undertaking a Foundation degree course. The Panel was of the view that the Course Team showed a lack of clarity in this regard, with it becoming clearer only when teased out by the Panel.

5.6 Project

Following on from how the FdEng was differentiated to the HNC or former HND, the FdEng should provide students with opportunities to develop communication skills, problem solving, team working and other employability skills - all of this could be achieved through a project at Level 4. A project would provide a capstone assessment piece to fuse knowledge and skills together and provide students with something to demonstrate their employability to employers. This could also increase the type and level of work placement opportunities for students. The Panel was of the view that there was an over-reliance on the work based learning and that a separate project would really enhance both the course and the student experience. Students

needed to have the confidence to solve unseen problems, not only simply follow set processes.

5.7 Student Support and Study Skills

The Panel informed the Team that all students had spoken very favourably in relation to the level and type of support provided to them but the Panel enquired if any consideration had been given to adopting peer mentoring as when raised this was something which students would welcome. The Course Team advised that due to the small numbers this already happened informally between years and student groups but they could consider a more structured approach going forward.

The Panel enquired where study skills, including the use of the Harvard system of referencing, and independent learning were being developed within the programmes – these were required for students transitioning from school to College, for returners to education and also for those wishing to progress to degree level study. The Course Team noted that they did not utilise Harvard referencing and the Panel recommended that they implement it consistently to include in module reading lists. Furthermore, study skills were not directly covered within the programmes.

5.8 Guest Lecturers

Students had advised that they did not receive any guest lectures but noted the visit to the power plant. The Panel encouraged the Team to avail of the expertise within its linkages with employers and alumni to provide guest lectures and this would greatly enhance both programmes as well as the overall student experience. Alumni pen pictures would also greatly enhance marketing and promotional material.

5.9 Module Descriptions

The Panel noted that modules covered considerable content, however, currency in respect of the use of contemporary technologies and terminology was lacking. The absence of programming in the Electrical and Electronic Engineering course was also noted as well as current issues such as the 'internet of things'. Revision to the documentation in this regard was essential to attract prospective students and for the courses to be seen as exciting and forward looking. Staff's own professional development was equally important to ensure that their own knowledge was kept up to date – the use of guest lecturers was a cost-effective way of doing this.

5.10 Programme Specifications

Further review of the programme learning outcome maps was required as some modules did not achieve any or very few outcomes. All programme learning outcomes must be met at Level 5.

The Panel sought clarification on how the balance between an analytical and design approach was considered and was advised that this was through the Team's own experience, with the Team going on to provide some examples.

5.11 Higher Level Apprenticeship

The Panel sought and was provided with clarification on how the HLA operated and suggested to the Course Team that they engage with the wider HLA framework and consider Level 3 apprentices who were seeking to progress their journey. This would provide a recruitment opportunity and help to increase numbers as well as enhancing the current student profile.

The Course Team informed the Panel that some discussions had already taken place with employers in relation to the Level 5 part-time HLA programme and of which employers were very supportive. To retain the provision of Level 5 qualification in the North West was of key importance to employers.

6 CONCLUSIONS

The Panel commended the programmes on the following:

- The highly employable graduates who are successfully in gaining employment in the field.
- High level of progression to University courses.

The Panel agreed to recommend to the Academic Standards and Quality Enhancement Committee that the programmes be approved for a period of three years (intakes 2019/20 to 2021/22 inclusive) subject to the conditions and recommendations of the Panel being addressed and a satisfactory response and a revised submission being forwarded to the Academic Office **by 20 February 2019** for approval by the Chair of the Panel.

Minimum and maximum intakes

The **minimum** intake for both courses recommended by the Faculty is 15 students (FT and PT combined).

The **maximum** intake for both courses recommended by the Faculty is 20 students (FT and PT combined).

Conditions

i) That all issues identified by the Academic Office and detailed in the appendix to the panel report are addressed;

ii) That the assessment of the Work Based Learning module is revised to ensure the learning outcomes are met – the academic assessment template previously provided by the Faculty Partnership Manager should be adopted (section 5.4 refers);

iii) That a Level 4 project is incorporated into both programmes (sections 4, 5.2 and 5.4 refer);

iv) To update the content of the module descriptions to reflect contemporary technologies and terminology in the field (sections 3.2, 3.5 and 5.9 refer);

v) To establish an industrial liaison panel and report at least annually to the Faculty;

vi) To clearly articulate how and where graduate attributes are developed on both courses (Section B2.9.1 Graduate Qualities) (sections 4 and 5.3 refer).

Strong Recommendations

i) To work with central departments to promote the programmes and confirm alignment with the QAA Foundation degree characteristics (sections 3.2, 3.3, 5.3, 5.4, 5.5 and 5.9 refer);

ii) To review work based learning to include preparation and support for students at all stages (sections 3.1, 3.6, 4 and 5.4refer);

iii) To ensure that study skills are being developed and embedded throughout both courses (sections 4 and 5.7 refer).

7 APPRECIATION

The Chair thanked the Panel, in particular, the external members, and the Course Teams for their valuable contribution to the revalidation process.

DT 10.01.2019