

ULSTER UNIVERSITY

REPORT OF A MEETING OF THE REVALIDATION PANEL FOR UNIT 3C3 FDSC APPLIED INDUSTRIAL SCIENCES (SOUTHERN REGIONAL COLLEGE)

27 March 2019

PRESENT: Professor Gillian Armstrong, Director of Business Engagement, Business Institute, Ulster University Business School (Chair)
Professor Aine McKillop, Associate Dean (Education), Faculty of Life and Health Sciences, Ulster University
Ms Louise O'Boyle, Associate Head of School of Art, Ulster University
Professor Christine O'Connor, Assistant Head of School of Food Science and Environmental Health, Dublin Institute of Technology
Dr Ian Turner, Associate Professor in Teaching and Learning, College of Life and Natural Sciences, University of Derby
Ms Christina Moffett, Student Representative, Southern Regional College

IN ATTENDANCE: Mr Jerome Marley, Faculty Partnership Manager (Biomedical and Environmental Sciences), Faculty of Life and Health Sciences, 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.

- FdSc Applied Industrial Sciences (Chemical Sciences or Life Sciences) (2Y3S/PT)
[Chemical Sciences – Newry campus
Life Sciences – Portadown campus]

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); Biosciences (2015) and Biomedical Science (2015).
4. Preliminary comments from Faculty Partnership Manager and Panel members.

3 MEETING WITH SENIOR MANAGEMENT TEAM

3.1 Stakeholder engagement and future sustainability

The Panel noted that this was now a well-established programme which was generally making a difference, not least to local employers, and enquired what level of stakeholder engagement had been undertaken to inform the revised curriculum and what steps were being taken to ensure its future sustainability.

The Senior Team in attendance advised that the College had placed a Business Support Unit in place. They went on to outline how tripartite engagement between employer/student/lecturer was inherent in all work-based learning. Theory and practical elements of the course were reviewed and mapped to the student learning experience. Employers' views were sought on what knowledge and skills students needed to work in the industry and this informed both the curriculum and the design of the College's physical laboratory spaces. Consultations with the External Examiner also provided input into the review. Student feedback was also widely considered, and obtained through Staff Student Consultative Committees, module feedback and a student survey undertaken with current and graduate students.

It was noted that no major changes were made to the curriculum other than aligning module learning outcomes and the number of assessments to Ulster's curriculum design principles. Review, as always, was ongoing and would be informed by employer, industry and student requirements.

In terms of the wider strategy in terms of longevity and sustainability, this programme fitted within the STEM agenda and the College had recently received assured STEM status. Through the Business Support Unit, the Team was hoping to widen this course out to NI SMES and was also currently considering the development of a Biology and a number of other strands which would widen uptake of the course for the future.

The employability figures from the programmes were excellent - employers were investing in the students and wanted to retain them as employees when they had completed the course or support them to undertake the next level.

3.2 Staff Development

The Panel asked if any staff had considered undertaking part-time PhD study as this would greatly inform and enhance their teaching, or if anyone held professional body membership. In response to the latter, no staff were currently members of the Royal Society of Chemistry, however, they did actively engage with the body and make use of its resources. In addition, all students were encouraged to become members, noting that membership fees were supported by the College.

All members of staff were allocated 30 hours of CPD annually. Development opportunities were also identified through employment development days held throughout the year as well as through the formal staff appraisal process. Some staff had also participated in the Lecturers into Industry programme. All staff were provided with training on new equipment, the VLE and any other requirements on an ongoing basis or as the need arose. There was also a commitment in place from management to support staff to undertake Master's study.

3.3 Staff Resources

Given that the course was delivered at two campuses, the Panel enquired how this was managed in practice. The Team advised that Tuesday and Thursday were blocked out for delivery at Newry and Wednesday for Portadown. Joint team meetings were always held throughout the year and standardised modules were taught across both campuses with input from all staff – it was very much a team approach. The physical resources to support the programme were also mirrored at both campuses to ensure parity of student experience.

The Team confirmed that a member of staff was permanently located at each campus but that some staff did travel between the two. Students were also provided with a one-hour personal tutorial each week to ensure that any issues were being addressed; this was further supported with screen shares, use of the VLE and interactive online sessions. The Go to Meeting

platform was widely used to interact and engage with students and course resources and recorded lectures were also hosted online for students to engage with at a time convenient to them.

3.4 Delivery model

The Panel noted that the 2Y3S delivery model was being phased out by the University but that it had been approved to continue for this course. Given the challenges of this model, the Panel enquired as to the rationale for its continuation. The Senior Team advised that students on this model were all employed and undertaking the course funded by their employer through an HLA. They would continue to be employed over the summer (semester 3) regardless of having attend college or not. This model allowed them the meet module learning outcomes during the summer semester and complete the course over two years. They acknowledged that the demands of the course were a challenge and that students had to be fully committed from the outset, however, to date this had never been an issue with these students. The part-time route was available as an alternative for students not funded through an HLA or in employment in the area.

3.5 Retention

The Panel enquired as to retention and progression and was advised that in the 2017/18 academic year all 15 students on the Chemical Sciences pathway successfully completed; and all 5 on the Life Sciences are currently on track to successfully complete.

A great level of support was available to students to ensure that any academic or other issues were addressed and additional support provided as required. Three handbooks clearly defining the roles of the mentor, the student and the workplace supervisor were provided at the outset and all steps taken to ensure that all parties were aware of expectations, learning outcomes and requirements. Staff would also continually monitor through 6 - 8 weekly visits.

3.6 Engagement with Ulster University

The Panel enquired as to the level of student engagement with the University throughout the programme and was advised of the one week residential held at and delivered by Ulster for the Chemical Sciences pathway students. All students had opportunities to access Ulster staff and discuss opportunities for progression to further study. This was further enhanced by talks from the Careers Office and a formal process now being in place on the Ulster website for applications to the Level 6 apprenticeship.

3.7 Minimum and Maximum intakes

The Senior Team confirmed that due to laboratory space, the maximum intake would be 15 and the minimum 15 but that the combined figure would always be in excess of 15.

4 MEETING WITH STUDENTS

The Panel met with a group of students at different stages of the programme, all of whom were funded through an HLA and a graduate of the programme currently on the Level 6 HLA funded programme.

During discussions the following was noted:

- The course had been chosen for a number of reasons including wanting to undertake an apprenticeship and earn a wage whilst studying; its highly structured nature; no desire to go to University.

- All students were very positive when asked about the resources available including the high-quality laboratory equipment, the library and other readily accessible resources, however, noted that more access to academic journals and papers would be helpful.
- Access to e-books was available, however, most tended to use physical books and the inter-campus request service was very quick.
- Course material was held on the VLE Moodle and online lecture recordings available through Go to Meetings were very useful, in particular for revision and could be accessed around work commitments.
- It was noted that Moodle had become quite cluttered and it was sometimes difficult to find the up to date and relevant material and the calendars were sometimes out of date and unreliable. Students recommended that both would benefit from a refresh.
- The workload and course expectations were challenging but manageable provided you kept on top of it and were organised, but this was made clear to students at the outset. The end reward would be well worth it.
- Protected time for study during worktime varied between employers, however, in general line managers were flexible, provided that students had completed their work tasks.
- The variety of assessment was good, and students also welcomed the fact that the course was not examination focused.
- Feedback was not always provided in a timely manner after a first piece of coursework so as to help and guide in the undertaking of a second piece.
- Opportunities to apply training gained in the workplace were available in the course.
- Students were provided with adequate information on progression opportunities and support from lectures and careers tutors on UCAS personal statements and completion of applications.
- All students confirmed that in terms of employability this course undertaken through an employer funded HLA was definitely more assured than if they went to University.
- In relation to the student experience, there were some but not many opportunities for two campus cohorts to integrate, however, the students felt that this would be useful and they could learn from each other's knowledge and different experiences.
- Lecturers visited students at their workplace every 6 – 8 weeks to ensure that they were progressing and meeting learning outcomes and in many cases students were expected to have learnt a new technique between visits.
- The course provided a quicker integration into a company and a quicker sense of accomplishment compared to studying towards a degree at University. The rewards were apparent as they progressed through the course, not least the fact they as they were employed they were also getting paid.
- Seeing the physical results of their efforts in the workplace and that the importance of their role was a real motivator.
- The graduate from the programme currently undertaking a Level 6 HLA noted some confusion around the use of 'apprentice' after having completed the FdSc but noted that the former provided more independence and an increased contact with Ulster staff.
- Students had opportunities to share practice with students from other employers during class time and student presentations provided their peers with an insight into other roles.
- In the workplace students confirmed that they were also able to avail of a variety of opportunities outside of the laboratory environment and get an insight into the many different roles in the industry.

The Panel thanked the students for attending; for their enthusiasm and clear pride in both their own role and in the course - they were excellent ambassadors for the programme. The Panel wished the students well in their studies and future career.

5 MEETING WITH COURSE TEAMS

5.1 Revalidation

The Panel noted the ongoing stakeholder engagement in respect of the programme and asked the Course Team to outline how the course had changed during the review undertaken for revalidation. The Course Team advised the Panel of the main changes as had been outlined during the earlier meeting with the Senior Team which included the amalgamation of some 10 credit point modules and the introduction of a 'long thin' Chemistry module in response to student feedback on the coverage required in this key area. Modules were reviewed in terms of credit points, number of learning outcomes and reduction in assessment, in line with Ulster's curriculum design framework. Two 10 credit point modules had been retained.

The Panel pointed out the issue of the inclusion of a 5-credit point module and noted that this was not permitted within University regulations. The Team explained that this related to an element delivered at and by Ulster but were advised that it should be incorporated into the 15-credit point module Analytical Science and make this up to 20 credit points. It was noted that some of the clarity required in relation to programme structure and credit points may be presentation related in the document but that these issues must be clarified in the revised submission.

5.2 Volunteering

When asked if students undertook any volunteering or community-based learning as part of the course, the Team advised that this was often undertaken not as part of the course per se but many were involved in community outreach programmes through their own employers. There was a high student uptake of such opportunities on a regular basis and this was set out in student portfolios. The Panel enquired if the use of e-portfolios had been considered and was advised that it had although was not possible due to employer data protection issues in taking material out of the workplace.

In relation to equality, diversity and inclusion, the Panel noted that the apprenticeship model should facilitate delivery of these agendas and would be useful for marketing purposes.

5.3 Assessment Strategy

The Panel noted the range of assessments, the role of formative assessment and provision of feedback and asked what had informed the overall assessment strategy. The Course Team advised that the team had met and discussed assessment and this had also been informed by student feedback. They had considered assessment methods and types of assessment to ensure an even spread across the course as well as the learning outcomes and noted that formative assessment was present in all modules. They had also introduced credit to essay plans which they found greatly improved the quality of the students' final submissions. Assessment from the beginning of the programme was further built on in each module culminating with the knowledge and skills required to undertake for the final pieces in year 2.

The Panel noted the extensive training undertaken by students in the workplace and enquired if any credit for this was being given in module content and assessment to avoid duplication of effort. The Course Team provided examples and, in particular, noted Work Based Learning 2 which required students to write up a project on which they had worked throughout their employment. Some competencies gained in the workplace were also given credit in the Development Skills for Industry module and training provided the evidence that the learning outcomes had been met. The range projects was very varied but were in response to individual employer need and would always be based on pre-existing business workload requirements.

The Panel noted the two 10 credit point modules – Academic Skills and Laboratory Procedures – appeared to have the same assessment types but clarity was provided by the Course Team

in that the presentation assessed the depth of knowledge in the subject as well as presentation skills and these skills were reinforced in later modules. The word counts also aligned with the University's curriculum design principles. It was further noted that presentations provided an ice breaker opportunity early in the course for students to engage with one another.

5.4 VLE and Blended Learning

The role of the VLE and blended learning was of key importance for the programme and the Panel asked how this was managed and maintained across the overall programme and individual modules. The Course Team advised that all students were provided with a standard module handbook and study guide for each module and these were also available on the VLE. The course area on Moodle was very structured and provided students with access to a wide range of material. The Panel raised the student issue around the out of date material and that perhaps the VLE required a review and refresh.

Access to academic journals would also be welcomed by students and the Course Team was asked to consider this going forward in order to encourage and sign post students to current research in the field through the VLE.

5.5 Feedback

The Course Team were advised of the issues raised by students in relation to the timing of feedback in relation to the next assessment and asked how and when student feedback was provided. The Course Team clarified that feedback was always provided within 15 working days and that the former may have been due to a slight overlap with that timeframe and the next assessment. They advised, however, that this would not be an issue in the revised programme. The Team also noted that all written assessments (essays, reports, presentations) were submitted electronically via Turnitin with feedback provided online.

The Panel noted that it might be prudent to ensure that students were aware of what constituted feedback – they may receive feedback and not recognise it as such as it could take many different forms.

5.6 Study Skills

The Panel enquired how study skills were being developed throughout the course and was advised that this was done through the Academic Skills module but also through personal tutorials to make a much more independent learner by the end of Level 5. The Course Team provided considerable support in this area and this was augmented by input by employers in the work-based setting.

The Panel noted that the passion and enthusiasm for the subject had shone through during the meeting with students but it was important that they were able to access academic research as well as knowing how to do so. The Course Team advised that if students showed an interest in a particular area that it would be identified during the 6 weekly monitoring visits and they would signpost students to current research papers as required. They further advised that guest speakers were invited to the College to speak with students and this provided them with an insight into current and future issues in the industry.

In relation to allocated effort hours in relation to independent learning, the Team ensured that this was properly utilised and structured. This was achieved through a requirement for students to prepare their own worksheets based on lecture material provided online as evidence that they had engaged with and understood the topics covered. Sample exam questions were also posted online and which were widely utilised by students; students were signposted to key areas of interest and other reading material; and discussion forums were

also used amongst both staff and students. Staff were able to monitor online engagement and intervene as required in the event of any student not engaging to the level as would be expected.

5.7 Part-time mode (non-HLA)

The Panel noted that the course was very dependent upon HLA funded students on the 2Y3S model but enquired how they recruited to the standard part-time programme. The Course Team advised that the laboratory space was designed to replicate what would be found in industry so these students would get a similar experience. Recruitment to part-time was very low but employers were also willing to support part-time students and provide the work based learning placements.

Part-time was marketed in the College prospectus, online and at internal HE events and it was hoped that next year it would be further developed as a way for employers to upskill their staff. Although a full-time programme was an option, there was currently no real demand as funding would be an issue.

5.8 Modules

The Panel recommended that the title of the Laboratory Practices module be revised to Good Laboratory Practices in order to reflect current industry terminology.

It was also recommended that all modules be reviewed to reflect current terminology and industry language - including regulatory affairs, QA, health and safety, for example - and that this would also enhance employability.

Clarification was provided in respect of a 'patchwork assessment' in that it comprised a number of different elements, similar to a portfolio.

In terms of module content and linkages with employers and Chambers of Commerce, it was also suggested that the Team keep abreast of up and coming issues and tap into any opportunities that these may bring going forward.

Cross-campus module delivery was not an issue and the Team explained to the Panel how moderation was carried out – this was a standardised approach and evidenced through a formal process.

6 CONCLUSIONS

The Panel commended the programmes on the following:

- i) The ways in which digital learning technologies are utilised within the programme;
- ii) The significant investment in facilities and resources to support the programme;
- iii) The level of employer engagement and how this is being used to develop the curriculum on an ongoing basis;
- iv) The student-led approach to curriculum design;
- v) The enthusiasm and pride within the student group – they were excellent ambassadors for the programme and this could be utilised to great advantage in marketing going forward;
- vi) The significant progress that has been made with the course since it was first evaluated.

The Panel agreed to recommend to the Academic Standards and Quality Enhancement Committee that the programmes be approved for a period of five years (intakes 2019/20 to

2023/24 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 14 May 2019** for approval by the Chair of the Panel.

Minimum and maximum intakes

The Senior Team confirmed the maximum intake would be 15 and the minimum 15 but that the combined figure (2Y3S and PT) would always be in excess of 15 students.

Conditions

- i) That all issues identified by the Academic Office and detailed in the appendix to the panel report are addressed, and in particular, that a clear course structure setting out module credit points and which aligns the Ulster's curriculum design principles is provided as part of the programme specification;

Recommendations

- i) That the Laboratory Procedures module is retitled to Good Laboratory Practice and that this and other modules, in particular Organic Pharmaceutical Science, are reviewed to reflect current industry terminology. Such a review would also enhance student employability (section 5.8 refers);
- ii) That the Course Team undertakes a review and refresh of the student-facing VLE and course area on Moodle, to ensure that all information is current and accessible to students (sections 4 and 5.4 refer);
- iii) That there is an increased utilisation of research databases and e-books and students are clearly signposted to current research articles and journals (sections 4, 5.4 and 5.6 refer);
- iv) That the Course Team ensures that the assessment schedule is made clear to all students (section 4 refers);
- v) To ensure that staff resources and the future development of these resources is kept under review going forward; to include CPD opportunities for staff for further advancement including Master's and part-time PhD study (sections 3 and 3.2 refer);
- vi) To further encourage volunteering opportunities amongst students as part of the civic contribution agenda (and development of the graduate skills) (section 5.2 refers);
- vii) To maximise the use of student and alumni testimonials in marketing and published course material (sections 4 and 5.8 refer).

7 APPRECIATION

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