ULSTER UNIVERSITY

REPORT OF A MEETING OF THE REVALIDATION PANEL UNIT 3B3: STRATIFIED MEDICINE – UG / PG

16 November 2018

PANEL:

Dr Michaela Keenan, Associate Dean (Education), Faculty of Computing, Engineering & the Built Environment, Ulster University (Chair)
Dr Clare Carruthers, Senior Lecturer, Department of Hospitality and Tourism Management, Ulster University
Mr Andy McAnallen, Vice-President Campaigns and Communication, Students' Union, Ulster University
Dr David Meredith, Senior Lecturer in Biochemistry & Biomedical Science, Oxford Brookes University
Dr Helen Wheadon, Non-Clinical Senior Lecturer Cancer Biologist, Gortnavel General Hospital, Glasgow

REVALIDATION UNIT CO-ORDINATOR:

Dr Catriona Kelly, Senior Lecturer, School of Biomedical Sciences, Ulster University.

IN ATTENDANCE:

Mrs Ayla Guarino, Academic Policy and Standards Officer, Academic Office, Ulster University

1 INTRODUCTION/BACKGROUND

The panel was convened to consider the following provisions:

- BSc (Hons) Stratified Medicine (with CertHE and AB exit awards), Magee campus
- MSc Stratified Medicine (with PgCert and PgDip exit awards), Distance Learning

The provision aims to produce graduates or postgraduates with specialist training in the area of personalised/stratified medicine applicable to all professions allied to health care and suitable for those students who wish to pursue research studies in this, or related disciplines.

The undergraduate provision is a full-time three-year degree programme leading to the award of BSc (Hons) in Personalised Medicine, offered on-campus between the Magee Campus of Ulster University and the Altnagelvin Hospital Campus. Each year offers 6 compulsory 20 credit point modules (level 4 at year 1, level 5 at year 2 and level 6 at final year). With an optional placement year (DPP/DPP(I)) after successful completion of year 2. There are no optional modules; choice would be offered to students when selecting a final year research project.

There are two exit awards associated with the programme. Students who successfully complete 120 credit points of level 4 modules may exit with a CertHE Personalised

Medicine. Students who successfully complete 240 credit points of level 4 and 5 may exit with an AB Personalised Medicine.

The MSc in Personalised Medicine is offered fully online in both FT and PT modes. The full-time mode is a one year 3 semester course comprised of 8 compulsory 15 credit point modules (level 7) delivered in semesters 1 and 2 with a research project module (60 credit points) in semester 3. There are two exit awards associated with the programme. Students who successfully complete 60 credit points may exit with a PgCert. A PgDip may be awarded to students who successfully complete 120 credit points. The MSc would be awarded after subsequent satisfactory completion of the 60 credit points research project (180 credit points total).

2 DOCUMENTATION

The Panel received the following documentation:

- Agenda and programme of the meeting
- Guidelines for evaluation and revalidation panels
- QAA subject benchmark statement for Master's Degree, September 2015
- QAA subject benchmark statement for Biosciences, November 2015
- External examiners' reports for the last two years
- Preliminary comments from panel members
- Revalidation documentation

3 MEETING WITH SENIOR MANAGEMENT TEAM

3.1 Context of Provision

The Panel asked the senior staff to elaborate on how the provision sits within the strategic plans and priorities of the University and the Faculty. The senior team advised that the Faculty of Life and Health Sciences had a very broad portfolio in which this provision fitted very well. The provision was well established with a solid track record in terms of recruitment, quality and meeting demands of employers. The course was focused on employability and this was ensured by maintaining close links with employers. The Faculty's overall strategy was to continue the development of non-MaSN provisions to meet employers' demand. Another key strategy discussed was the integration of research and teaching, explaining that the staff was research active and their expertise directly informed the curriculum.

3.2 Demand and Intakes

The senior team explained that although the undergraduate provision was capped at 27 students in term of MaSN, this was closely reviewed within the Faculty and adjusted over time. Accordingly, the team explained that if the demand for the provision increases, the MaSN would be adjusted accordingly. The Panel noted that the programme was marketed and promoted in local schools and attracted mostly students studying sciences, such as Biology, Chemistry and Mathematics, who did not want to progress into medicine. The senior team also mentioned that they were considering international recruitment. The

Panel suggested the team considers including Bioinformatics in the course title, as this might make the course more attractive for marketing purposes.

3.3 January Intake

The senior team explained that the request to introduce a January intake for the MSc provision was in line with other postgraduate courses in the School, such as the Biomedical Science course, adding that this would also be accommodating for their part-time students and students in employment. The senior team added, that as there were no prerequisites, students would have the freedom to take the modules in any order, apart from the research project module which they would need to take prior to undertaking the research project.

3.4 Resources

The Panel queried how the team would facilitate a potential rise in student numbers. The senior team assured the Panel that the Faculty had a clear process in place to support any expansion, and that the Head of School could further request for additional resources such as more members of staff or e-tutors.

3.5 Part-time Mode for the Undergraduate Provision

The senior team explained in response to the Panel's query that there had been no demand for part-time mode for the undergraduate provision, adding that if such a demand arises, this would be carefully considered.

3.6 Interface with the Trust

The senior team explained that the Trust's staff who contributed regularly to the teaching or took part in any assessment would have a Recognised Teachers status. This was not the case with the ones invited to give a single lecture or to provide a clinical perspective.

4 MEETING WITH STUDENTS

The Panel met with a group of students from different year groups from the existing provision.

The Chair welcomed the students noting that they were an important part of the quality assurance process, helping in assessing the quality of their experiences and to identify areas where improvement can be made. A wide-ranging discussion took place in areas including career guidance, placement, timetabling and assessment and feedback.

4.1 Placement and Career Guidance

The students were of the opinion that the course team provided ample career guidance as well as close interaction with local industry. Improvement was expressed in regards to preparation for placement. The final year students expressed their struggle in securing placement, feeling they did not receive enough support preparing their CV, preparing for interviews or in general throughout the application process. The Panel noted that the degree was not originally designed as a four year programme and that the placement year, for this initial cohort, was only introduced after the course began. The Panel was assured

that this was remedied with subsequent cohorts. First and second year students described a different experience, detailing a more structured integrated approach to career guidance and placement support.

4.2 Assessment and Feedback

The students all felt the assessment load was heavy and was bunched together and expressed how this was difficult and stressful. The students agreed class tests were preferable to other forms of coursework, as they encouraged revision throughout the semester and lowered the pressure during examination time.

The students agreed that normally feedback was given within a 3 week period, adding that they had experiences instances where this took much longer. The students were of the opinion that it would have been better to have more online tests, as the feedback from these would be immediate. The Panel noted that the quality of the feedback received on coursework was highly valued by the students, feeling it was clear, detailed and easily fed forward to other pieces of assessment.

4.3 Peer Interaction and Support

The Panel were advised that a student-led society was established with the intention of bringing all year groups together and allowing for third year students to provide support to first and second year students. Unfortunately, the students explained that this did not materialise.

4.4 Positive and Negative Aspects of the Provision

The Panel asked the students what they most enjoyed about their programme. The students expressed satisfaction in regards to the variety of subjects on offer, the support their received from their tutors and teaching staff, and the student collaboration and peer support. The Panel noted the students felt they would benefit from more reading days as well as more lab experience.

The Panel thanked the students for their engagement and wished them well in their studies and future career.

5 MEETING WITH COURSE TEAM

The provision was discussed in detail with the Subject Team.

5.1 Placement

The team explained that placement was optional and was introduced in 2016 while the provision was already running. The team described the escalation in the number of students going on placement, currently taken up by 50% of the cohort. The Panel noted that these numbers were expected to rise further in the following year.

The Panel noted that the strong industry links and the Industrial Liaison Committee informed the curriculum and module content, as they helped clarify the specialist and practical skills that were required by employers. These included safety in lab conduct, lab

protocols, analytical skills, as well as more generic skills such as presentation skills, collaboration, team and group work and digital literacy.

The team explained that students were provided with support from the initial stages of preparation for placement. Preparation for placement started in year one, with study skill sessions and guidance on CV preparation. A Returning Placement Seminar in second year allowed students who recently completed their placement to share their experience and offer advice. The University's Career Development Centres delivered a workshop to prepare for employment, and the School informed the students of various summer schemes that were available with local employers. The team explained that they would take a proactive approach in communicating all placement opportunities that arise locally, nationally and internationally.

The Panel members were assured that where students would struggle in securing a placement, the School would step in to assist, noting that ultimately the responsibility of securing placement did lie with the students.

5.2 Peer Interaction and Support

The Panel mentioned the low level of activity of the student-led society which was raised during the meeting with the students. The team acknowledged the society's untapped potential and agreed their involvement was needed to ensure it became more active. The team described other social activities they undertook to encourage peer interaction and promote cohort identity such as "Pizza and Welcome" events, and agreed to examine further ways for staff to get involved in enhancing this social aspect of the provision.

5.3 MSc Provision

The Panel queried the background of the students on the MSc provision, noting that the majority would be employed full-time, although some may have progressed from an undergraduate course and would only be part-time employed. Most of the students would have a biological background with some having a computational one.

The Panel queried how the team would provide support to students with such diverse backgrounds and skills. The team assured the Panel that they would have mechanisms in place to support students from different backgrounds, explaining that the introductory modules were designed to ensure all students acquire the same basic knowledge needed to proceed in the programme. Specifically, the team explained that as biostatistics knowledge would vary among the student cohort, to ensure all students on the course had sufficient biostatistics knowledge, the team would begin by delivering at a very basic level and build on that, offering further assistance and resources if needed.

The team advised that for every 25 students there was a dedicated specialised e-tutor which students could contact for further assistance and support, adding that this system had proven extremely successful in the past.

5.4 Assessment and Feedback

The Panel asked how the team had taken account of the University policies and principles when designing their assessment strategy. The team replied that they had thoroughly engaged with the curriculum design principles and the principles of assessment and feedback, explaining that the programme and individual modules had been reviewed to

ensure compliance. This was exemplified by the reduction of the number of assessment items, adjustment of word count and revision of timing allowed for feedback return. Other changes to the current provision included reduction of the number of class tests and introduction of various assessment methods, as well as providing students with formative assessment where possible.

The Panel enquired why many of the BSc modules contained more than two elements of assessment, and asked for a rationale for the high number of class tests given to the students, specifically in the first year. The team were of the opinion that this was a valuable way of evaluating students' progress in light of the complexities of content taught, describing the scaffolding nature of the assessment and how they found this to be beneficial for students to synthesise information in preparation for their final examination. The team added that this was in accord with the School, giving an example of Biomedical Science course which used similarly assessment techniques.

The Panel discussed with the team other forms of assessments used, such as practical lab reports, presentations, and written reports, and how these were designed in a scaffolding manner to assess the students' study skills as they develop over the length of the provision.

The Panel expressed concern regarding the heavy assessment load, reporting the students felt the clustering of assessment around weeks 11 and 12 was especially stressful. The Panel noted that the bunching of assessment might seem heavier than it was in practice as some of assessment items presented in the Exemplar Assessment Table were submission dates for long standing projects. The team explained that they took various measures to lower the pressure from students, such as showing flexibility in submission dates, ensuring no pieces of assessment were due on the same day and providing students in advance with the assignment requirements and assessment criteria, as well as creating milestones along the way, to ensure timely progression. The team also explained that some of the items in the Exemplar Assessment Table, such as the practical reports, were misleading as students would prepare these during class. The possibility of utilising the exam period was suggested by the Panel. The team explained that this was used informally, and would, as requested by the Panel, articulate this more clearly in the course document.

The team assured the Panel special support and allowances would be offered to any student suffering from any disability, such as mental health issues, dyslexia or other learning difficulties. In addition, inclusivity of assessment was achieved by using variety of assessment techniques.

The Panel requested the team review their assessment and feedback strategy to avoid bunching of assessment, and that that clarification of the scaffolding nature of the overall assessment structure be outlined in the course document.

5.5 Academic Integrity

The Panel queried how the team would ensure academic integrity with the online provision. The team explained that, in order to ensure academic integrity, many of the assignments would be individualised using specific tasks rather than general questions to allow for unique submissions from each student. In addition, the team explained that as this would be a small cohort, it would be easier to know each student from a very early

stage. Furthermore, the team added that students would be warned against using “essay mills” and that *Turnitin* would also be used to prevent plagiarism.

5.6 Lab Experience

The Panel reported that the students didn’t feel they received sufficient lab experience. The team acknowledged this was an issue. They explained that they were actively looking for solutions, assuring the Panel that currently students were already being exposed to more lab experience than was the case in previous cohorts.

5.7 Internationalisation

The team explained that internationalisation was one of the main drivers behind both the request to introduce a January intake and the request to change the name of the provision from Stratified Medicine to Personalised Medicine. The Faculty had consulted widely on the title and found the term ‘stratified’ was almost exclusively used in the UK as the wider scientific community had adopted the terms ‘Personalised’ and/or ‘Precision’ medicine. Accordingly, the Faculty hoped that the name change would increase the international reach of the programmes.

The Panel noted that although there were currently very few international students on the provision, the School was looking at the Chinese market for expansion, specifically in relation to the postgraduate provision. Nevertheless, they noted that this had been proven challenging as the Chinese market seems to prefer face-to-face delivery rather than a distance learning mode.

The team added that internationalism was also embedded within the modular content which introduced both UK and international health care systems.

5.8 Neurological and Psychiatric Disorders Module

The Panel was of the view that although the module *Neurological and Psychiatric Disorders* provided a valuable example of the use of Personalised Medicine and the potential of biomarker discoveries, its main focus was not on Personalised Medicine but on the disorders themselves. Accordingly, the team were asked to consider revising the module description to clarify the focus would be on Personalised Medicine with neurological and psychiatric disorders used as illustrations.

6 CONCLUSIONS

The Panel commended the team on the following aspects evident from the validation:

- The quality of the documentation and the team involvement in this;
- The strong industry links and the employer forum which have a positive impact on the course, including the interface with and for the students and the design of curricula to align with industry needs;
- The valuable provision of a placement year and the escalation of numbers of students going on placement since it was introduced in 2016;
- The internationalisation rationale for the provision’s name change which is aligned with Ulster University’s strategic goals;

- The prestigious accreditation by the Institute of Biomedical Science (IBMS), and the unique selling point that it brings;
- The high level of student satisfaction with the programme; and
- The team ethos, with dedicated staff engaged and invested in the programme and in the students.

The Panel agreed to approve the change in the provision's title from Stratified Medicine to Personalised Medicine and the introduction of a January intake for the MSc provision starting from 2019. The Panel agreed to recommend to the Academic Standards and Quality Enhancement Committee that the programme 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 11 January 2019** for approval by the Chair of the Panel.

Conditions

i) That matters of detail and clarification as identified in the notes by the Academic Office to the Panel are addressed, including providing indicative minimum and maximum student numbers for each mode of delivery; and

ii) That the assessment and feedback strategy be reviewed in line with the Curriculum Design Principles to avoid bunching of assessment; that rationale be provided within the document to clarify the scaffolding nature of the overall assessment structure; and that rationale be provided for each module with more than two items of assessment.

Recommendations

i) That the Exemplar Assessment map for the MSc Personalised Medicine be reviewed to eliminate bunching of assessment;

ii) That the module description and learning outcome of BIO549 *Neurological and Psychiatric Disorders,* be revised to focus on Personal Medicine with neurological and psychiatric disorders used as illustrations; and

iii) That modules BIO123 *Mathematical Methods* and BIO826 *Mathematical and Computational Methods* be revised to ensure differentiation.

7 APPRECIATION

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