Validation Panel Report

1.	**Title of Programme:**	Certificate in Healthcare Analytics
2.	**Award Type:**	Special Purpose Award
3.	**NFQ Level:**	Level 9
4.	**No. ECTS:**	30 Credits
5.	**Duration:**	2 Semesters (26 weeks)
6.	**ISCED Code:**	0913 – Nursing and Midwifery
7.	**School / Centre:**	ATU Mayo School of Health Science, Wellbeing and Society
8.	**Department:**	Department of Nursing, Health Science and Integrated Care
9.	**Type of Review:**	New Programme
10	**Date of Review:**	14th March 2022 and 11th May 2022
11.	**Delivery Mode:**	Part-time, Online
12.	**Proposed Student Intake:**	25
13	**Proposed Start Date:**	September 2022
14	**Panel Members:**	Marianne Moutray (Chair) Prof. Peter Bath (University of Sheffield) Prof. Dawn Dowding (University of Manchester) Mr Hugh Mc Bride (Secretary)
15.	**Proposing Staff:**	Mr Justin Kerr (Head of School) Mr Richard Holmes Mr Brian Mulhern Mr Deaglan O'Riain Dr Carmel Heaney Dr Elaine McHugh
16.	**Programme Rationale:**	The *eHealth* project has made significant progress in terms of the roll-out and integration of ICT systems across Irish healthcare services. The project objectives include: improved population wellbeing; placing the patient at the centre of the healthcare delivery system; improved health service provider efficiencies; and the provision of an Electronic Health Record (EHR). The objectives align with the overall healthcare reform agenda which signals the move to a more sustainable model of healthcare, (the concept of the right care in the right place at the right time) including new models of care, technological innovation and healthcare insights derived from data. Achievement of these objectives can only be realised through unlocking the 'meaningful use' of the vast amounts of healthcare data which these systems continue to capture and generate.

		The proposed Certificate in Healthcare Analytics programme will provide students with an understanding of unlocking the 'meaningful use' of vast amounts of healthcare data. It aims to equip students in the use of data analytics to influence healthcare delivery by raising their level of healthcare analytics awareness and application skills.
		Data analytics capacity and capability will be increasingly required with the volume of data generated by digital healthcare. The ability to understand, use and manipulate data through analytics skills and competency will enable graduates of the programme to champion healthcare analytics as a driver of quality within speciality areas of discipline or interest. The programme will equip graduates to play an active role in local decision-making which has the potential to feed into centralised healthcare service business intelligence units.
17.	Background Research and Stakeholder Consultation:	The need for, development and design of the proposed programme was informed and supported by a comprehensive process of research and consultation with key health sector stakeholders in the region.
		The research included: a comprehensive review of relevant Irish healthcare policy documents and international report; the findings of a research project undertaken by members of the programme team focussed on assessing the extent of healthcare analytics awareness, skills and capacity across the Saolta University Health Care Group.
		The external stakeholder consultation involved contacting a wide range of stakeholders by email and phone, followed by online discussion sessions focussed on eliciting participant opinion about the nature and validity of the programme proposal, including the proposed award title, themes, intended learning outcomes, content and mode of delivery. The findings from the consultation sessions are reported in an appendix to the programme document.
		The programme document references a number of digital health programmes currently available nationally, including at Level 9, as part of the HSE Digital Academy suite if offerings. IT Sligo offer a Certificate in Health Data Analytics at Level 7 and a Certificate in Practices in Health Informatics at Level 6: the course format is outlined for each. The document includes a statement differentiating the proposed programme from each of these similar offerings.
		The programme team also consulted with colleagues in ATU Galway who developed and run a Higher Diploma in Business in Business Analytics (Level 8).
18	Target Learners, Demand and Graduate Profile:	Continuous professional development of the healthcare workforce is essential in the area of healthcare analytics in the context of an environment which is set to become ever more reliant on health data and technology. In order to use data and technology effectively, there is need for frontline staff to have knowledge of analytics.
		The programme is intended as an upskilling opportunity for people already working in a variety of frontline roles in the health services sector. This includes qualified clinicians, health and social care

		professionals, administrative, technical support and solutions development staff in health care environments in both acute and community operations.
		The programme will be of interest to frontline healthcare staff interested in using digital technologies as a catalyst towards improved healthcare. It is aimed at those who are looking for self-development and stimulation to rapidly improve their service and enhance their potential in the use of data and information to improve healthcare and gain health service insights.
		The programme will prepare people working in a variety of frontline roles for undertaking an active role in digital transformation and local decision-making in their specific health care setting, feeding into and interacting effectively with centralised healthcare service business intelligence units. It will provide learners with contextual skills and competencies to build, promote and manage data and information and to understand and apply analytics in digital healthcare.
		Graduates will be able to identify areas within the health care environment where healthcare analytics can be applied.
		There is a documented shortage of eHealth workers across the full spectrum of frontline job roles, spanning clinical, social care, informatics, and administration.
19.	Entry Requirements, Access, Transfer & Progression:	The minimum entry requirement is a Level 8 degree with a H2.2 classification or equivalent, and at least 1 year experience working in or providing solutions into a healthcare environment. There is no cognate award requirement for entry and eligible candidates may be from any domain of activity of the health services sector.
		Provision is made for entry through RPL, for international candidates and for English language proficiency.
		Eligible candidates will be required to confirm access to IT hardware and software necessary for participation in the programme, and to administrative rights on a computing device to download Microsoft Power BI (64 bit version) and Excel add-ins within the package.
		In the context of ensuring equality of access for all qualified candidates, the Panel queried whether provision will be made to support students who do not have access to the necessary technology resources required for participation. The programme team explained that the university has a device loan scheme in place for this purpose, and that the team would use their best endeavours to ensure the scheme was applied if necessary to the proposed programme.
		Section 8.1 of the programme document includes a paragraph titled 'Profile of Learners and Anticipated Demand'. This paragraph should be included in section 5 of the document and edited to ensure consistency with the minimum entry requirements. Scope also exists for including a more descriptive narrative profiling potential candidate job roles and backgrounds.

20	Award Title, Award Standards, Minimum Intended Programme Learning Outcomes:	The Panel consider that the award title is consistent with the programme rationale and intent, and reflects the programme aims.
		The use of the QQI science awards standards is valid.
		The minimum intended programme learning outcomes (MIPLOs) as stated are consistent with the award standards at Level 9 and with the programme rationale, intent and aims.
21.	Programme Structure and Curriculum:	The proposed 30 Credit programme will be delivered over 2 semesters (26 weeks). It comprises 3 modules, all at Level 9: *Statistics for Healthcare Analytics* (10 Credit) will be delivered over 13 weeks in Semester 1; *Health Care Analytics: Tools and Practices* (10 Credit) will be delivered over 13 weeks in Semester 2; *Connected Health* (10 Credit) will be delivered over the full academic year.
		The curriculum design and delivery structure is intended to balance the enhancement of student's ability to use data and technology effectively with an understanding of the context of application.
		Overall, the Panel consider that the proposed programme structure and curriculum is coherent, well balanced and consistent with the programme rationale, aims, award title and the MIPLOs.
		With regard to module intended learning outcomes, the Panel consider that these should be reviewed for each module to ensure they are appropriate to the standard required for a Level 9 award. For example, that students be expected to 'analyse, interpret, critically evaluate, synthesise' rather than to 'identify, describe, examine'. Scope also exists for a more succinct statement of intended learning outcomes for the *Connected Health* module.
		With regard to the *Statistics for Healthcare Analytics* module, the Panel expressed concern that the content focus seems overly theoretical and suggested the need for the incorporation of a significant practical element involving the students gaining hands-on experience 'doing statistical analysis' exercises.
		The Panel questioned whether the title of the *Connected Health* module was sufficiently descriptive of the module aim and content. The programme team explained their satisfaction that this is the case, being consistent with the understanding of the term as used in the context of the Irish healthcare system.
		The Panel welcome the inclusion of ethical considerations as reflected in the programme and module learning outcomes and indicative content. The programme team explained the expectation that entrants onto the programme will have an ethical awareness, and a grounding in ethical concepts and frameworks needed for moral reasoning, from their undergraduate studies and work experience.
22.	Teaching, Learning and Assessment:	The programme will be delivered fully online. The proposed delivery model involving synchronous live sessions of the same day every week, alternating between 2 hour sessions and 4 hour sessions every second week. The sessions will be scheduled between 1200h – 1400h and in the evening time. All of these sessions will be recorded, and the recordings

made available to the students. Guest lecturers from the sector will be invited. The synchronous sessions will be supplemented with a suite of directed asynchronous sessions and related resources.

The Panel were unclear about the proposed total number and the weekly average of contact hours for each module, as per the Approved Programme Schedule (APS) and the module descriptors. The amount of contact time indicated seems inconsistent with expected sectoral norms and with the indicative schedule of delivery (section 6.9). The programme team agreed that this needs to be reviewed and clarified. In this regard, it would be helpful if the programme team included a summary table in the programme document indicating the proposed total student contact hours for each module, split between synchronous and asynchronous delivery (this table in addition to the delivery schedule already included in section 6.9).

Students coming from diverse healthcare/clinical settings will bring their own unique experiences and challenges to the learning environment. In this context, online class discussions/blogs around health data/connected health and existing and emerging healthcare analytics trends will be encouraged to facilitate a shared learning experience. Publicly available healthcare case studies data sets which fall under the Irish eHealth Open Health Data Policy and other international policy will be utilised as appropriate. Examples of such data sets appropriate for use on the programme include but are not exclusive to datasets located on sites such as:
https://data.gov.ie/organization/health-research-board
https://data.ehealthireland.ie/
https://data.cso.ie/

Students will be made explicitly aware of ethical issues related to health data including the governance of health data and information, confidentiality, integrity, anonymity and privacy of data.

It is not envisaged that students will use datasets from their own work context. However, this is not explicitly stated in the programme document. In the event that students do use datasets other than those that are publicly available, all necessary data governance, data sharing and data protection requirements and protocols must be observed and followed. Mechanisms to address, support and assure adherence to appropriate practice should be documented and students advised accordingly.

The programme team indicated an intention to coordinate and integrate delivery across the modules. The Panel welcomes this approach as a teaching and learning strategy.

Assessment will be entirely by continuous assessment using a variety of approaches and assessment instruments. Provision is made for the use of cross-modular integrated assessment across the *Connected Health* and *Health Care Analytics: Tools and Practices* modules. The Panel welcome this approach and suggest that other appropriate possibilities also be considered, including across the *Statistics for Healthcare Analytics* and *Health Care Analytics: Tools and Practices* modules (as indicated in the module descriptor of the former).

		The reasons for the grade allocation to each module for the proposed cross-modular 'Power BI' assignment (including for the imbalance in weighting) is not clear in the programme document. The programme team explained the reason for this as relating to the specific module learning outcomes assessed in each case. The Panel emphasised the importance of clarifying expectations and specifying the marks allocation for each element of the assignment and for each module in the assignment brief given to the students.
		The Panel consider that scope exists to clarify the nature and weighting of the various assessment instruments it is planned to use in the *Statistics for Healthcare Analytics* module. Consideration should be given to including assessment elements that provide students with an opportunity to engage in 'doing statistical analysis' and that assesses their ability in this regard.
		The Panel welcome the commitment of the programme team to fostering academic integrity, promoting good academic conduct, and preventing and mitigating academic misconduct.
23.	Resource Implications:	An additional staffing resource of 0.5 FTE at Assistant Lecturer Grade will be required to deliver the proposed programme.
		Other additional resources required include provision for 6 guest lecturer hours and €2,000 for library materials and resourcing for administration support.
24.	Synergies with Existing Programmes:	None identified.
25.	Findings and Recommendations:	The Panel commend the programme team for the initiative, and for the open and constructive nature of their engagement with the Panel.
		Overall, the Panel is very supportive of the development of the proposed programme. The Panel consider that the programme concept is valid, that the rationale for the programme is well-researched, that there will be a demand for the programme, that the programme will meet genuine education and training needs, and that it will be a valuable contribution to the development of necessary capacity in the health services in the region and nationally.
		The proposed programme is highly relevant in the contemporary environment and addresses a significant gap in education provision that accords with health sector policy priorities and the *eHealth* strategy.
		The Panel recommends approval of the proposed programme subject to the conditions and recommendations outlined below.
		Conditions: 1. State in the programme document that the School will endeavour to support students who do not have access to the necessary technology resources required for participation. 2. Review the intended learning outcomes for each of the modules to ensure they are appropriate to the standard required for a Level 9 award and are succinctly stated.

		3. Review the *Statistics for Healthcare Analytics* module descriptor to clarify the incorporation of a practical dimension requiring students to undertake statistical analysis. 4. Review and clarify the proposed total and average weekly contact hours for each module, amending the APS and module descriptors as necessary, and including a summary table indicating total contact hours for each module. 5. State in the programme document: that it is not envisaged that students will use datasets from their own work context; that in the event that students do use datasets other than those that are publicly available, all necessary data governance, data sharing and data protection requirements and protocols will be observed and followed, and that students will be advised accordingly; that mechanisms to address, support and assure adherence to appropriate practice are documented and will be made available to students. 6. Specify the nature and weighting of the various assessment elements to be used in the *Statistics for Healthcare Analytics* module.

		Recommendations:
		1. Reflect on whether the title of the *Connected Health* module is appropriately descriptive of the module aims and content.
		2. Consider other possibilities for incorporating integrated cross-modular assessment, including across the *Statistics for Healthcare Analytics* and the *Health Care Analytics: Tools and Practices* modules.
		3. Clarify in the programme document the reasons for the grade allocation to each module for the proposed cross-modular 'Power BI' assignment.
		4. Edit and amend the programme document as follows:
		  • to reflect the transition from GMIT to ATU (including replacing references to 'GMIT' with 'ATU' or with 'ATU Mayo' where appropriate);
		  • move content relating to learner profile and demand from section 8.1 to section 5.1, ensuring consistency with the minimum entry requirements, and providing more descriptive profiles of target learners;
		  • include reference to the cross-modular assessment that has been adopted and incorporated into the programme in section 9.2.

26.	FAO: Academic Council:	Approved:		
		Approved subject to recommended changes:	√	
		Not approved at this time:		
27	Signed:			
		Chair	Secretary	