Report of External Peer Review Group for the Programmatic Review of:

Programme	Code	Level	ECTS	Duration	Award Type	Embedded Awards
Bachelor of Science (Honours) in Construction Management	GA_ECOMG_H08	8	240	4	Major	Embedded Award: Bachelor of Science in Construction Management
						Embedded Award: Higher Certificate in Science in Construction Management
Bachelor of Science in Construction Management	GA_ECOMG_B07	7	180	3	Major	Embedded Award: Higher Certificate in Science in Construction Management
Higher Certificate in Science in Construction Management	GA_ECOMG_C06	6	120	2	Major	Parent Award: Bachelor of Science (Honours) in Construction Management
Bachelor of Engineering (Honours) in Civil Engineering	GA_ECIAG_H08	8	240	4	Major	Embedded Award: Bachelor of Engineering in Civil Engineering
						Embedded Award: Higher Certificate in Engineering in Civil Engineering
Bachelor of Engineering in Civil Engineering	GA_ECIVG_B07	7	180	3	Major	Embedded Award: Higher Certificate in Engineering in Civil Engineering
Higher Certificate in Engineering in Civil Engineering	GA_ECIVG_C06	6	120	2	Major	Parent Award: Bachelor of Engineering (Honours) in Civil Engineering
Bachelor of Science (Honours) in Architectural Technology	GA_EARAG_H08	8	240	4	Major	Embedded Award: Bachelor of Science in Architectural Technology
						Embedded Award: Higher Certificate in Science in Architectural Technology
Bachelor of Science in Architectural Technology	GA_EARCG_B07	7	180	3	Major	Embedded Award: Higher Certificate in Science in Architectural Technology
Higher Certificate in Science in Architectural Technology	GA_EARCG_C06	6	120	2	Major	Parent Award: Bachelor of Science (Honours) in Architectural Technology

Bachelor of Science (Honours) in Quantity Surveying and Construction Economics	GA_EQSCG_H08	8	240	4	Major	Embedded Award: Bachelor of Science in Quantity Surveying and Construction Economics
						Embedded Award: Higher Certificate in Science in Quantity Surveying and Construction Economics
Bachelor of Science in Quantity Surveying and Construction Economics	GA_EQSCG_B07	7	180	3	Major	Embedded Award: Higher Certificate in Science in Quantity Surveying and Construction Economics
Higher Certificate in Science in Quantity Surveying and Construction Economics	GA_EQSCG_C06	6	120	2	Major	Parent Award: Bachelor of Science (Honours) in Quality Surveying and Construction Economics
Higher Diploma in Engineering in Building Information Modelling	GA_EBOLG_L08	8	60	1	Major	N/A
Certificate in Engineering in Building Information Modelling	GA_EBUIL_N08	8	20	1	Minor	Parent Award: H Dip in Engineering in Building Information Modelling

Date of Panel: Monday, March 28th, 2022

External Peer Review Group:

Panel	
Chairperson	Prof. Dewar Finlay, School of Engineering, Ulster University
University/IoT Representative	Dr. Brian Graham, Lecturer, Department of Built Environment, Waterford Institute of Technology Dr. Roisin Murphy, Senior Lecturer, School of Surveying & Construction Management, Technological University Dublin
University/IoT Representative	Ms. Finola Deavy, Lecturer/Architect, Technological University of the Shannon Dr. Rita Scully, Lecturer, Dept of Built Environment, Technological University of the Shannon (Chair of Parallel B)
Industry Representative	Ms. Denise Kennedy, Construction Consultant, RJD. Mr. Tomas Kelly, Director, Cost Management, Aecom.
Graduate Representative	Mr. Adrian Gildea, Contractors Representative, Colas. Mr. Neil Anderson, Architectural Technician, Kevin Jackson Architects
Secretary	Ms. Carmel Brennan Assistant Registrar (Quality), Galway-Mayo Institute of Technology

1   Introduction to Programmatic Review

Programmatic review involves a periodic, formal, systematic, comprehensive and reflective review and evaluation of each programme and award offered by the Institute for purposes of programme development, quality enhancement and revalidation. It is an important means of ensuring and assuring, *inter alia*:
- that required academic standards are being attained;
- that programmes and awards remain relevant and viable;
- that student needs, including academic and labour-market needs, are addressed;
- that the quality of programmes and awards is enhanced and improved;
- public confidence in the quality of GMIT's programmes and awards.

GMIT last conducted Programmatic Review in 2014 and was due to undertake it again in 2019/20. The process was delayed until this year due to the COVID-19 pandemic.

The objective of a programmatic review is to review the development of the programme over the previous five to seven years, with particular emphasis on the achievement and improvement of educational quality. The focus is principally on the evaluation of quality and the flexibility of the programmes' responses to changing needs in light of the validation criteria and relevant awards standards. In particular, a programmatic review seeks to confirm that the promise evidenced at the original validation (or since the last programmatic review) in terms of academic quality, relevance and viability has been realised, and that the programme is adapting appropriately to evolving circumstances.

The specific objectives of a programmatic review are, *inter alia,* to:
- analyse and evaluate the effectiveness and efficiency of the programme, including details of student numbers, retention rates and success rates;
- review the development of the programme in the context of the requirements of employers, industry, professional bodies, the Irish economy and international developments;
- evaluate the response of the programme to regional and societal requirements and to educational developments;
- evaluate the feedback mechanisms for students and the processes for acting on this feedback;
- review the feedback from students relating to the student experience of the programme
- evaluate stakeholder engagement including links and collaboration with industry, business and the wider community;
- review feedback from employers and graduates;
- evaluate the physical facilities and resources provided for the provision of the programme;
- review any research activities in the field of learning in the disciplinary areas and their impact on teaching and learning;
- consider likely future developments in the disciplinary areas;
- make proposals in relation to updating programmes and modules, and to discontinuing programmes or parts of programmes.

Academic Council identified three themes to be specifically addressed during the 2021/22 Programmatic Review namely:
- Assessment – ensure the assessment strategy and methodology are appropriate and aligned with learning outcomes and that students are not over-assessed.
- Employability – ensure that students develop career skills necessary to prepare them for employment. Embed professional practice (e.g., work placement, work-based projects in the programme, ensuring that there is an appropriate plan for their management)
- Sustainability – review modules and learning outcomes to ensure that the sustainability agenda is addressed, debated and applied within student learning and assessment, as appropriate.

2   Methodology

The programmatic review process involves a self-evaluation by each programme board followed by an external peer review. The Programme board engaged in a process of the collection and review of data related to the programme and feedback from stakeholders including students, graduates and industry. The overall programme and each individual module have been reviewed and recommendation(s) for updates made as required.

The External Peer Review Group (EPRG) received a copy of the Self Evaluation Review documentation and the programme documentation including any proposed changes. The EPRG then met the Programme Board (Appendix A) to discuss the programme and the documentation provided, as well as meeting a representative sample of students (Appendix B). The schedule for the review visit is contained in Appendix C.

3   Background to Programme(s) Being Reviewed

Bachelor of Science (Honours) in Construction Management
Bachelor of Science in Construction Management
Higher Certificate in Science in Construction Management

Construction Management has been defined by the Chartered Institute of Building (CIOB) as the management of the development, conservation, and improvement of the built environment. The construction management degree programme brings together the managerial and technical skills and methodologies required by graduates to carry out management functions across the construction industry. Prior to the introduction of specialist construction management degree programmes, the management functions on site were typically undertaken by either graduate civil engineers or by supervisors with a construction trades background. As the industry became increasingly complex, there was an increased demand regionally, nationally, and further afield for a specific qualification in construction management leading to a level 8 qualification.

The BSc (Hons) Construction Management was introduced as a four-year ab-initio programme in GMIT (Galway Mayo Institute of Technology) in 1998. It was offered in parallel with the successful two-year National Certificate in Construction Studies and one year add-on National Diploma in Building Management at the (then) Galway Regional Technical College. The programme was offered in response to the increasing professionalisation of the construction management role across Ireland and the United Kingdom and was one of the first honours degrees to be offered at GMIT. In 2005, the National Certificate in Construction Studies and one year add-on National Diploma in Building Management, were reconstituted as a parallel two-year Higher Certificate and three-year level 7 ordinary degree in construction management as part of a wider national review of programme classifications.

Graduates of this programme are in great demand from industry and very employable. In the current market, graduates can easily obtain employment and in most cases can select from several options. Construction Management graduates are regularly amongst the best paid in the annual GMIT graduate survey. Graduates may seek to progress to chartered membership of an appropriate professional body. Members of the CIOB may obtain the title of Chartered Construction Manager. Members of CABE may obtain the title of Chartered Building Engineer and of Chartered Engineer with the appropriate post-graduate experience and expertise.

Bachelor of Engineering (Honours) in Civil Engineering
Bachelor of Engineering in Civil Engineering
Higher Certificate in Engineering in Civil Engineering

The B.Eng. Civil Engineering is a broadly-based civil engineering programme. In this context, the programme is structured to give the graduate an understanding of the execution and management of civil engineering projects from inception to completion. The philosophy of the programme is to provide an educational experience which will encourage the development of a range of skills, attitudes and personal attributes which will be of benefit to the graduate in the civil engineering industry, its associated professions and society in general.

The Civil Engineering programme in GMIT in recent years has increased student numbers and the CAO points for entry to the programme. This is primarily due to the more positive outlook amongst Leaving Certificate students and their parents with respect to programmes in the Built Environment.

The demand for Civil Engineering graduates from GMIT is very strong in Ireland and the UK. This is demonstrated by the interest of employers in the annual GMIT Built Environment Careers Fair and the frequent contacts by employers seeking placement students and graduates

The programme has been accredited by Engineers Ireland to enable graduates to apply for associate member grade and gain the title of 'Associate Engineer'. This is very important for our graduates as it means that their qualification is recognised abroad. In the third year of this programme, students undertake an industrial placement with an appropriate employer, and this allows GMIT to develop close links with the civil engineering industry. The industrial placement gives students the opportunity to relate their learning to real practice and provides a positive and valuable learning experience for students.

Bachelor of Science (Honours) in Architectural Technology
Bachelor of Science in Architectural Technology
Higher Certificate in Science in Architectural Technology

The BSc (Ord) Architectural Technology programme commenced in GMIT, in September 2006, as a three-year, Level 7, full-time undergraduate degree. The first graduation ceremony for architectural technology students was in November 2009.

In 2009, it was noted that a significant number of graduates from the BSc (Ord) Architectural Technology returned to further education, rather than gaining full-time employment upon graduation. This was due to the increasingly difficult marketplace for graduates obtaining employment and the effect of the economic downturn at that time. The BSc (Hons) undergraduate degree in Architectural Technology (1-year add-on) was designed to not lose graduates to other Colleges and Universities, but to instead retain students in their local area at GMIT and it had its first intake of students in 2011. Immediately, almost all graduates from the BSc (Ord) Architectural Technology progressed to the BSc (Hons) Architectural Technology in GMIT. Having an honours degree has substantially increased graduate employability. Because of this, in 2013 the Programme Board developed a Level 8 BSc (Hons) Architectural Technology ab initio undergraduate degree programme.

These programmes are accredited with the Royal Institute of Architects of Ireland (RIAI), due for renewal in September 2022, and with CIAT.

Bachelor of Science (Honours) in Quantity Surveying and Construction Economics
Bachelor of Science in Quantity Surveying and Construction Economics
Higher Certificate in Science in Quantity Surveying and Construction Economics

The fundamental purpose of the programme is to provide students with an education that will prepare them to commence careers as Quantity Surveyors at a Professional Level within both the private and public sectors of the construction and property industries worldwide.

The programme commenced in 2006 as a Level 7 Degree in response to the demands of industry in the region. In 2011 a one-year add-on L8 Degree was introduced. Accreditation was awarded in 2013 for the L8 Degree. The programme is available in a flexible manner to suit student requirements currently available at L6, L7 and L8 formats.

Higher Diploma in Engineering in Building Information Modelling
Certificate in Engineering in Building Information Modelling

3D modelling has been fully integrated into all programmes in the Department of Building and Civil Engineering since 2005. The successful integration of 3D modelling provided graduates with a unique skill set, which was in high demand by the construction sector, as evidenced by the subsequent high BIM-related employment rates across various employers. To build on this work, the Department prepared a submission to deliver an industry-focused BIM programme in response to the 2012 Springboard Programme call. This led to the delivery of a Certificate in BIM (level 6) to 19 participants during the 2012/2013 academic year, which primarily focused on technological and software applications.

The innovative use of these applications subsequently informed a two-year research collaboration with a local SME building contractor, Carey Building Contractors, which investigated the application of BIM on small-scale construction projects in Ireland. As part of this development process, an extensive horizon scan and review of industry BIM needs, and requirements identified a clear need for a dedicated industry focused Level 8 programme that would address the large competency and skills gap that existed in relation to BIM at the time.

The aim of the programme is to upskill and increase competency for professionals in the construction sector in the key discipline area of BIM. It is clear from this intensive engagement with industry that there is a strong demand for Building Information Modelling skills.

4   General Findings of the External Peer Review Group

Having considered the documentation provided and discussed it with the Programme Board, the External Peer Review Group recommends the following:

Accredited until the next programmatic review	
Accredited until the next programmatic review subject to conditions and/or recommendations[1]	X
Re-design and re-submit to the same External Peer Review Group after additional developmental work	
Not Accredited	

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[1] **Note:**
Approval is conditional on the submission of a revised programme document that takes account of the conditions and recommendations outlined in the report and a response document describing the actions to address the conditions and recommendations made by the External Peer Review Group (EPRG). In this report, the term 'condition' is used to indicate an action or amendment which in the view of the EPRG must be undertaken prior to the commencement of the next delivery of the programme. Conditions are mandatory if the programme is to be approved. The term 'recommendation' indicates an item to which the Programme Board should give serious consideration for implementation at an early stage and which should be the subject of on-going monitoring.

5   Programme-Level Findings – BSc (Hons) in Construction Management and Embedded Awards

Consideration for the panel	Overall finding: Yes/No/Partially
Is there an ongoing need for the programme and has evidence been provided to support it?	Yes
Is the level and type of the award appropriate?	Yes
Are the entry requirements for the proposed programme clear and appropriate?	Yes
Is there a relationship between this programme and further education?	Yes
Are the access, transfer and progression procedures appropriate?	Yes
Does the programme comply with the Institute norms for retention, both in first year and subsequent years? Where not, does the Programme Board proactively take appropriate measures to optimise student engagement and retention?	Yes
Does the programme meet the required standards for programmes at its NFQ level (i.e., conform to GMIT Award Standards[2])? For Parent Award? For Embedded Award(s) (if applicable)? For Exit Award (if applicable)? For Minor Award (if applicable)?	Yes
Is the programme structure logical, well designed, and can the stated programme intended learning outcomes, in terms of employment skills and career opportunities, be met by this programme?	Yes
Have appropriate learning and teaching strategies been provided for the programme that supports Student Centered Learning (SCL)?	Yes
Have appropriate programme assessment strategies been provided for the programme taking account of the student workload?	Yes
Is there evidence that learning and teaching is informed by research?	Yes
Have appropriate quality management procedures been implemented in line with GMIT's Quality Assurance Framework? (e.g., Induction, Programme Handbook, Programme Board, Student Feedback, External Examiners)	Yes
Does the proposed programme demonstrate an international dimension? (e.g., content, mobility, collaboration)	Yes
Does the programme encompass sustainable development principles and ethos?	Yes
Does the programme embed employability through the inclusion of work placements, employment preparatory module(s) and/or work-based projects?	Yes
Is there evidence of strategies to promote diversity and inclusion?	Yes
Is entrepreneurship, creativity and innovation embedded in the programme?	Yes
Has the efficiency of the programme's design been considered? For example, does the programme meet the Institute norms on staff: student ratios for programmes of this type?	Yes
Is the programme externally facing? (e.g., Stakeholder engagement, guest speakers, fieldtrips, applied projects)	Yes

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[2] GMIT has adopted QQI's award standards which are available HERE.

Space is recognised as an issue, particularly as student numbers increase. Whilst facilities are being upgraded and some additional space is being acquired, the issue of space remains. This is a campus-wide problem for many programmes, and one which the college is working to address.

Graduates of this programme are very employable, as they get a rounded education, with practical as well as theoretical aspects to the course. Students are informed about professional body recognition (CIOB, CIF, CABE) from the outset. Staff maintain contact with students post-graduation.

There is less sharing of modules recently due to increasing numbers and the specific needs of programmes. However, students from each of the disciplines in the Department work together on a competition.

Students who leave the programme are identified and offered assistance. If it is early in the year transfer options may be available. One of the main causes of attrition is students' choosing the wrong programme and thinking that it is a purely practical programme, rather than a degree in management applied to construction. Recent research into students who were not engaging found a range of causes including a dislike of online learning (a pandemic response), Covid, part-time work, sport commitments, IT issues and mental health. Undergraduate students prefer on campus learning. The programme offers flexible pathways with exit points after years 2 and 3. Health and safety is embedded in all modules, with 25% of the Site Management module in stage 2 covering this topic. This means that students are sufficiently aware and knowledgeable should they leave with a Higher Certificate.

Female enrolment would ideally be higher, and efforts continue to at local and national level to promote this discipline to females.

Mathematics can be an issue. Generic maths is studied across three programmes in the Department, but groups are also broken into more discipline specific maths cohort. The mixed abilities of students can be difficult to balance but engagement and motivation are key factors. The Maths Learning Centre is a key support.

The programme has built up a list of recommended employers for placements and students encouraged to work with them. There are very clear student and employer expectations. Students are visited twice when on placement in Ireland, with overseas students visited remotely. Students are required to produce weekly diaries, virtual site visit video and final report demonstrating that module learning outcomes have been achieved.

GMIT is about to merge with IT Sligo and Letterkenny IT to form Atlantic Technological University. Sligo offers construction management, but this is an online programme targeting a different cohort including international students. At this point in time no formal discussions have taken place in relation to any future alignment.

Staff research informs teaching including in topics such as lean construction and sustainability. The Department has recently developed a few postgraduate programmes.

The panel met a number of students on the programme. Students were very positive about the placement aspect of the programme and felt that the programme prepared them very well for it. Most students stayed on after the requisite 14 weeks and would like to see a shortened placement introduced at the end of first year.

The Programme Board proposed a number of changes relating to Programme Learning Outcomes, sequencing of modules, and individual module amendments to better reflect industry trends. All changes as outlined in Appendix D were approved and the programme was accredited until the next programmatic review subject to the recommendations below.

Commendation(s):

1. The panel are impressed with the sustainability ethos and principles of the programme.
2. There is strong evidence of a good relationship between students and teaching staff which is driving a positive student experience.
3. There is support available for in areas that can be challenging, and which promote student success e.g., Maths Learning Centre, Academic Writing Centre.
4. The Department is aware of and proactive in dealing with the challenges involved in the STEM cycle e.g., attracting candidates, supporting candidates in topics such as maths and writing.
5. Innovative approaches and a wide range of assessment and feedback methods are used across the programme.

Condition(s):

None

Recommendation(s):

1. Collaborative space would be beneficial for students, and continued efforts around this should be maintained. The Programme Board should continue to highlight the issue of resource requirements and sustain the efficient use of existing resources.
2. Expose students to industry earlier in the programme e.g., site visits, guest lecturers, field trips. This would allow students to gain further industry experience and see the application of the material they are studying.
3. Continue to engage in collaborative work and the application of good practice in this regard.
4. Consider whether there should be an alternative provided to the placement in instances where students are unable to undertake work placement.

Module Recommendations

Module Title	Findings
Digital Systems	Consider an alternative module title to better reflect the module content e.g., Digital Construction Management

For office use only (To be completed by Head of Department)	
Changes due to be implemented in:	
Changes to be implemented on phased or simultaneous basis:	
NB: If the programme changes are to be implemented simultaneously (all stages at once) then the Academic Information Systems Office must be notified immediately where modules have moved stages and an interim APS is required.	

6   Programme-Level Findings – BEng (Hons) in Civil Engineering and Embedded Awards

Consideration for the panel	Overall finding: Yes/No/Partially
Is there an ongoing need for the programme and has evidence been provided to support it?	Yes
Is the level and type of the award appropriate?	Yes
Are the entry requirements for the proposed programme clear and appropriate?	Yes
Is there a relationship between this programme and further education?	Yes
Are the access, transfer, and progression procedures appropriate?	Yes
Does the programme comply with the Institute norms for retention, both in first year and subsequent years? Where not, does the Programme Board proactively take appropriate measures to optimise student engagement and retention?	Yes
Does the programme meet the required standards for programmes at its NFQ level (i.e., conform to GMIT Award Standards[3])? For Parent Award? For Embedded Award(s) (if applicable)? For Exit Award (if applicable)? For Minor Award (if applicable)?	Yes
Is the programme structure logical, well designed, and can the stated programme intended learning outcomes, in terms of employment skills and career opportunities, be met by this programme?	Yes
Have appropriate learning and teaching strategies been provided for the programme that supports Student Centered Learning (SCL)?	Yes
Have appropriate programme assessment strategies been provided for the programme taking account of the student workload?	Yes
Is there evidence that learning and teaching is informed by research?	Yes
Have appropriate quality management procedures been implemented in line with GMIT's Quality Assurance Framework? (e.g., Induction, Programme Handbook, Programme Board, Student Feedback, External Examiners)	Yes
Does the proposed programme demonstrate an international dimension? (e.g., content, mobility, collaboration)	Yes
Does the programme encompass sustainable development principles and ethos?	Yes
Does the programme embed employability through the inclusion of work placements, employment preparatory module(s) and/or work-based projects?	Yes
Is there evidence of strategies to promote diversity and inclusion?	Yes
Is entrepreneurship, creativity and innovation embedded in the programme?	Yes
Has the efficiency of the programme's design been considered? For example, does the programme meet the Institute norms on staff:student ratios for programmes of this type?	Yes
Is the programme externally facing? (e.g., Stakeholder engagement, guest speakers, fieldtrips, applied projects)	Yes

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[3] GMIT has adopted QQI's award standards which are available HERE.

The Programme Board have suggested only minor amendments to the programme at this time as they had recently introduced a range of changes following internal QA review.

A discussion took place on the forthcoming merger of partner colleges to become Atlantic Technological University and the implication this may have on programmes in this discipline. There will be a transition period to align systems, policies, and procedures. All three partners will continue to offer their respective programmes, with each offering being slightly different. Any alignment of programmes is most likely to begin with postgraduate programmes.

Space is an issue throughout the School of Engineering, but some progress being made with laboratories been reclassified and refurbished and a commitment by the college to enhance facilities.

Employers have been satisfied with the standard of students that go on work placement, and typically offer employment to graduates. Students are encouraged to seek placement themselves, with some going on international placements. During Covid placement was more challenging with some placements truncated and an alternative option available. Lecturers reported that following work placement students are more engaged and career focussed.

Mathematics can be an issue. Generic maths is studied across three programmes in the Department, but groups are also broken into more discipline specific maths cohort. The mixed abilities of students can be difficult to balance but engagement and motivation are key factors. The Maths Learning Centre is a key support. Students complete exercises and upload to a virtual maths folder, receiving feedback on their work. Following an analysis of the correlation between students' maths grades on entry and their subsequent performance on the programme, the maths entry requirement was raised.

There is less sharing of modules recently due to increasing numbers and the specific needs of programmes. Therefore, Civil Engineering students are together for all modules. However, students from each of the disciplines in the Department work together on a competition. The programme has recently seen an increase in intake from 48 to 59.

Graduate feedback has been very positive, especially in respect of the practical nature of the programme. During the Covid-19 pandemic there was a transition to online learning which some students embraced. However, some weaker students have struggled with the new mode of learning and will benefit from a full return to site.

Female enrolment on the programme is 10% which is an increase on previous years. Efforts continue at local and national level to promote this discipline to females.

All students have access to the software packages they require. They can download to their own devices or log in remotely. Students do not learn coding but there is a strong emphasis on the use of excel.

The weighting of continuous assessment varied between modules, but there is an attempt to avoid a high number of final examinations. Students are provided with an assessment calendar at the start of each year. A range of assessment methodologies are used including portfolios, online quizzes, lab workbooks, drawings, individual and group projects and presentations.

There is a strong emphasis on health and safety with all students obtaining Safe Pass. Risk assessment and analysis is included in modules. Students brought on site visits are briefed on health and safety, hazards, PPE. Whilst health and safety are not explicitly assessed on work placement it is integrated into it.

Report writing can be a challenge for engineering students, yet this is a key industry skill. Students are provided with a guide to support report writing and are introduced to this important aspect of communication in the Learning Innovation Skills (renamed Academic & Professional Skills) module in stage 1 of the programme. Students can also avail of support from the Academic Writing Centre.

The panel met a few students on the programme. Students were very positive about the placement aspect of the programme and felt that the programme prepared them very well for it. Most students stayed on after the requisite 14 weeks and would like to see a shortened placement introduced at the end of first year.

The Programme Board proposed several changes relating to Programme Learning Outcomes, sequencing of modules, assessment and individual module based on the review. All changes as outlined in Appendix E were approved and the programme was accredited until the next programmatic review subject to the recommendations below.

Commendation(s):
1. The panel are impressed with the sustainability ethos and principles of the programme.
2. There is strong evidence of a good relationship between students and teaching staff which is driving a positive student experience.
3. There is support available for in areas that can be challenging, and which promote student success e.g., Maths Learning Centre, Academic Writing Centre.
4. The Department is aware of and proactive in dealing with the challenges involved in the STEM cycle e.g., attracting candidates, supporting candidates in topics such as maths and writing.
5. Innovative approaches and a wide range of assessment and feedback methods are used across the programme.

Condition(s):
> None.

Recommendation(s):
1. Utilise a civil engineering focus approach to teaching as opposed to building/architectural focus e.g., CAD, Revit, BIM.
2. Collaborative space would be beneficial for students, and continued efforts around this should be maintained. The Programme Board should continue to highlight the issue of resource requirements and sustain the efficient use of existing resources.
3. Expose students to industry earlier in the programme e.g., site visits, guest lecturers, field trips. This would allow students to gain further industry experience and see the application of the material they are studying.
4. Continue to engage in collaborative work and the application of good practice in this regard.
5. Consider whether there should be an alternative provided to the placement in instances where students are unable to undertake work placement.

For office use only (To be completed by Head of Department)	
Changes due to be implemented in:	
Changes to be implemented on phased or simultaneous basis:	
NB: If the programme changes are to be implemented simultaneously (all stages at once) then the Academic Information Systems Office must be notified immediately where modules have moved stages and an interim APS is required.	

7   Programme-Level Findings – BSc (Hons) in Architectural Technology and Embedded Awards

Consideration for the panel	Overall finding: Yes/No/Partially
Is there an ongoing need for the programme and has evidence been provided to support it?	Yes
Is the level and type of the award appropriate?	Yes
Are the entry requirements for the proposed programme clear and appropriate?	Yes
Is there a relationship between this programme and further education?	Yes
Are the access, transfer and progression procedures appropriate?	Yes
Does the programme comply with the Institute norms for retention, both in first year and subsequent years? Where not, does the Programme Board proactively take appropriate measures to optimise student engagement and retention?	Yes
Does the programme meet the required standards for programmes at its NFQ level (i.e., conform to GMIT Award Standards[4])? For Parent Award? For Embedded Award(s) (if applicable)? For Exit Award (if applicable)? For Minor Award (if applicable)?	Yes
Is the programme structure logical, well designed, and can the stated programme intended learning outcomes, in terms of employment skills and career opportunities, be met by this programme?	Yes
Have appropriate learning and teaching strategies been provided for the programme that supports Student Centered Learning (SCL)?	Yes
Have appropriate programme assessment strategies been provided for the programme taking account of the student workload?	Yes
Is there evidence that learning and teaching is informed by research?	Yes
Have appropriate quality management procedures been implemented in line with GMIT's Quality Assurance Framework? (e.g., Induction, Programme Handbook, Programme Board, Student Feedback, External Examiners)	Yes
Does the proposed programme demonstrate an international dimension? (e.g., content, mobility, collaboration)	Yes
Does the programme encompass sustainable development principles and ethos?	Yes
Does the programme embed employability through the inclusion of work placements, employment preparatory module(s) and/or work-based projects?	Yes
Is there evidence of strategies to promote diversity and inclusion?	Yes
Is entrepreneurship, creativity and innovation embedded in the programme?	Yes
Has the efficiency of the programme's design been considered? For example, does the programme meet the Institute norms on staff:student ratios for programmes of this type?	Yes
Is the programme externally facing? (e.g., Stakeholder engagement, guest speakers, fieldtrips, applied projects)	Yes

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[4] GMIT has adopted QQI's award standards which are available HERE.

Whilst there has not been any formal discussion in relation to how the Atlantic Technological University will proceed with different programmes in the same discipline, there is good relationships between the relevant Departments in each of the three partner colleges and they will work together in a positive and constructive way.

The programme adopts a diverse approach to assessment, with the Studio module being central in each stage of the programme and other core modules feeding into it. The assessment strategy pivots around this with 30+ ECTS based around a core project.

Peer Assisted Study Sessions (PASS) is offered on the programme, whereby PASS leaders (2nd year students) mentor first years for one hour per week.

Covid resulted in a pivot to online learning and alternative assessments. A lasting benefit is the technological skills gained by staff and the trial and introduction of new modes of teaching and assessment that had not previously been considered. Some aspects of the pandemic response will be retained e.g., BIM 360. Some responses worked well, for example students normally have an end of year exhibition which this year was conducted virtually using Sway.

The Programme Board are proposing the introduction of a placement in the programme. This has been informed by discussions with stakeholders in relation to the format of placement. Students will be prepared for in Semester 5 before going on placement in Semester 6, and it is hoped that may students will have the opportunity to remain with their employer over the summer. Students will be provided with a detailed handbook. There is a lot of experience in relation to the management of work placements within the Department. The Programme Board made space in the programme for placement by conducting a detailed review of module content from years 1 to 4 editing where necessary.

Retention of students can be an issue in stage 1 of the programme but improves in later years. The issue with first year can be to do with transition, or student expectations about the nature of the programme. Covid has impacted on retention. It is challenging for students to repeat projects over the summer as they lack the necessary collaboration and support. The programme team pride themselves on the level of pastoral care they provide students with. They conduct performance interviews halfway through the year and note a link between attendance and performance.

All modules start from basics in first year. There is no presumed prior knowledge. Students are taught that there are multiple ways to reach a point, so that even those students who have background knowledge benefit from the classes. It was noted that sometimes those with no previous knowledge outperform those that do. In general student performance is more strongly impacted by whether they like the Studio module than about the points they entered the programme on. Students will get additional support to get through academic modules if they are committed and work hard.

The programme team plan to run a creativity, innovation, and entrepreneurship summer camp with the intention of attracting those that are interested in a career in Architectural Technology. Funding has been secured to do this.

The panel met a few students on the programme. Students were very positive about the programme and found lecturers helpful. They welcomed the introduction of placement and stated that more Revit would be useful in 2nd year for students going out on placement in year 3. The existing content is useful for preparing graduates for industry but felt that there could be more involvement of industry in the programme. There is a big workload associated with the programme requiring students to manager their time. The 360 resources are useful. Clearer marking schemes/rubrics to assist students focus on what is required would be useful. Students enjoyed the CIOB challenge and the insight it gave into other programmes.

The Programme Board proposed several changes relating to Programme Learning Outcomes, sequencing of modules, assessment and individual module based on the review. All changes as outlined in Appendix F were

approved and the programme was accredited until the next programmatic review subject to the recommendations below.

Commendation(s):
1. The inclusion of placement to the programme is a welcome addition which will be of considerable benefit to students.
2. There was strong engagement and enthusiasm of an obviously experienced staff on this programme. This was particularly evident in the programme leads.

Condition(s):
    None.

Recommendation(s):
1. Take a coordinated approach to work placement coordination which should include the involvement of suitably qualified academics. Ensure that employers are vetted and are clear on the expectations for the placement, so students have a positive and developmental experience.
2. Consider whether there should be an alternative provided to the placement in instances where students are unable to undertake placement.
3. Review the repeat mechanism for students who fail placement or elements of it.
4. Strong consideration should be given to linking the Services and Design Studio content to provide students with an integrated experience.
5. Ensure that a continuous assessment schedule is provided to all students at the start of each semester/year ensuring that students can plan for deadlines. Provide clear marking schemes/rubrics for individual assessment components to enhance student clarity about expectations. A programme or Departmental wide assessment template may be useful in this regard.
6. Review the alignment of credit weighting and hours allocation for each module with a view to ensuring it is appropriate and consistent.

Module Recommendations

Module Title	Findings
Architectural Graphics and Communication 1	Module duration should read 26 weeks. Review volume of learning outcomes for this module given the credit weighting of the module.
History of Western Architecture Y1	This module should be consistently presented as semesterised.
Architectural Technology and Services 1	Review module learning outcomes to ensure that the active verbs used are appropriate. Consider the rationale for the inclusion of a final examination with such a low weighting. A project may be a better alternative.
Academic and Professional Skills Y1	The yearlong version of this module should be attached to the programme.
Architectural Technology and Services 2	Review the volume of learning outcomes for this module given the credit weighting of the module. Consider the rationale for the inclusion of a final examination with such a low weighting. A project may be a better alternative. Revise the reading list, particularly those listed as required, to ensure that the volume of resources is appropriate. Consider incorporating more e-books.

Professional Practice and Law Y3	The law element of this module should be more directly focussed on construction.
Detail and Design Studio Project 4	Consider aligning this project with the QS students to cost the building designs.

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Changes due to be implemented in:	
Changes to be implemented on phased or simultaneous basis:	
NB: If the programme changes are to be implemented simultaneously (all stages at once) then the Academic Information Systems Office must be notified immediately where modules have moved stages and an interim APS is required.	

8   Programme-Level Findings – BSc (Hons) in Quantity Surveying and Construction Economics and Embedded Awards

Consideration for the panel	Overall finding: Yes/No/Partially
Is there an ongoing need for the programme and has evidence been provided to support it?	Yes
Is the level and type of the award appropriate?	Yes
Are the entry requirements for the proposed programme clear and appropriate?	Yes
Is there a relationship between this programme and further education?	Yes
Are the access, transfer and progression procedures appropriate?	Yes
Does the programme comply with the Institute norms for retention, both in first year and subsequent years? Where not, does the Programme Board proactively take appropriate measures to optimise student engagement and retention?	Yes
Does the programme meet the required standards for programmes at its NFQ level (i.e., conform to GMIT Award Standards[5])? For Parent Award? For Embedded Award(s) (if applicable)? For Exit Award (if applicable)? For Minor Award (if applicable)?	Yes
Is the programme structure logical, well designed, and can the stated programme intended learning outcomes, in terms of employment skills and career opportunities, be met by this programme?	Yes
Have appropriate learning and teaching strategies been provided for the programme that supports Student Centered Learning (SCL)?	Yes
Have appropriate programme assessment strategies been provided for the programme taking account of the student workload?	Yes
Is there evidence that learning and teaching is informed by research?	Yes
Have appropriate quality management procedures been implemented in line with GMIT's Quality Assurance Framework?	Yes

[5] GMIT has adopted QQI's award standards which are available HERE.

(e.g., Induction, Programme Handbook, Programme Board, Student Feedback, External Examiners)	
Does the proposed programme demonstrate an international dimension? (e.g., content, mobility, collaboration)	Yes
Does the programme encompass sustainable development principles and ethos?	Yes
Does the programme embed employability through the inclusion of work placements, employment preparatory module(s) and/or work-based projects?	Yes
Is there evidence of strategies to promote diversity and inclusion?	Yes
Is entrepreneurship, creativity and innovation embedded in the programme?	Yes
Has the efficiency of the programme's design been considered? For example, does the programme meet the Institute norms on staff:student ratios for programmes of this type?	Yes
Is the programme externally facing? (e.g., Stakeholder engagement, guest speakers, fieldtrips, applied projects)	Yes

Most modules in this programme are yearlong. This is to allow students a chance to really grasp material before they are assessed. Whether the structure of the programme will need to change when GMIT becomes part of the Atlantic Technological University is unknown at this point.

A discussion took place on CAO points and whether they impacted on retention. The Programme Board's key focus is on output rather than input, and it was stated that Leaving Certificate points do not always accurately reflect ability. However, ideally it would be better to have higher points, particularly as it was feared that lower points may deter some applicants. The Programme Board has several initiatives which focus on student retention including engaging personally with students, yearlong modules and a reading week at the end of November. Sometimes students leave as they didn't fully appreciate what a QS does in advance of starting the programme. Some students leave after third year given the high availability of jobs, although some do return at a later point.

Many of the work placement employers have taken students for many years. The criteria for the placement are specified including that the employer will allow the student to shadow a chartered surveyor. The placement manual clearly sets both student and employer expectations and there are tri-partite agreements in place. Many students continue the placement throughout the summer.

Students are provided with dissertation manuals to support this module. Supervision commences when the dissertation proposal is finished, at which point students are mapped with suitable supervisors.

The panel discussed specific elements of the programme with the Programme Board including public works contracts, procurement, BIM and estimating. It was queried whether there was any issue with the number of software packages being used. It was stated that it was good for students to have experience of using different packages and that this was the feedback from students.

The Programme Board had identified modules which they had described as 'core' and which students should not progress without having completed successfully. A discussion took place on how this could be actioned.

A discussion on the adequacy of facilities referred to the constant need for more space. Some labs have been refurbished during Covid, and the suite of rooms are well kitted out with PCs and software. Whilst an additional room has been promised, increasing student numbers is putting pressure on the space available and it may be necessary to timetable after 6pm.

The panel met with some students. Students are busy on the programme, but like the inclusion of continuous CA and didn't note any imbalance of workload. It was suggested that the programme should include less Revit and more Excel. It was deemed easy to access the software required. Lecturers are generally approachable and accommodating and know those students who attend regularly. Students felt well prepared for employment and lecturers were helpful in this regard. It would be useful if the Learning and Innovation Skills (renamed Academic and Professional Skills) module was more related to the discipline being studied. Students were provided with module descriptors, but they may not always be the most up to date version. When asked how the programme could be improved, they stated that they would like to start the dissertation earlier and that they would like more and better feedback so they can know how they are performing.

The Programme Board proposed several changes relating to updating module content to reflect contemporary building procurement, design and construction; greater emphasis in modules on procurement, estimating, tendering from a contractor and sub-contractor prospective; separation of procurement and contracts accounts administration into two modules; and introduction of a module on construction sustainability in lieu of the integrated project. All changes as outlined in Appendix G were approved and the programme was accredited until the next programmatic review subject to the recommendations below.

Commendation(s):
1. There was strong engagement and enthusiasm of an obviously experienced staff on this programme. This was particularly evident in the programme leads.
2. Students very positive in respect of the support they received from the lecturers and the college and of their industry contacts on placement.
3. It was positive to see modes of electronic working embedded in programme as this is reflective of industry practice e.g., BIM.

Condition(s):
1. Ensure that the APS is accurate through ensuring that the correct levels, duration and contact hours are displayed.

Recommendation(s):
1. Consider whether restrictions in relation to progress and carry and/or pass by compensation should be applied to modules which have been identified as 'core'. In general, barriers to student progression are not desirable. Restrictions should be only implemented where necessary and where there is a very well-developed rationale, giving due consideration to unintended consequences.
2. Implement a more structured and consistent approach to feedback to students.
3. Stipulate in the APS special regulations the requirements that must be attained by level 7 students to progress to the final year of the level 8 programme. Consider making a case to SCSI in relation to the inconsistencies the existing threshold creates.
4. Identify aspects of the course that students who have not previously completed Design and Construction Graphics and Construction Studies for Leaving Certificate find difficult and consider providing relevant bridging workshops for this cohort.
5. Devise a plan whereby measurement and construction can be aligned and work together to alleviate student workload.
6. Map out where the programmes utilise integrated assessments. Ideally these should be included in assessment strategies to ensure that they occur irrespective of who is teaching the modules.
7. Review the total volume of estimating included within the programme considering whether it is sufficient given the importance of this topic for quantity surveyors.
8. Include any back-up plans for students who do not get placement in the programme documentation.
9. Ensure that there is adequate feedback provided to students on both formative and summative assessments so that they know how they are performing.
10. Tailor the content of the Academic & Professional Skills module to the discipline of Quantity Surveying and Construction Economics, where appropriate.

11. Ensure students are provided with a continuous assessment schedule to assist in workload planning and marking schemes to manage expectations. Consider the use of a department/programme wide assessment template to ensure consistency of communication.
12. Consider including a focus on the dissertation topic in the Research 1 module, supporting students to turn an identified issue into a dissertation topic.

Module Recommendations

Module Title	Findings
Academic & Professional Skills	Ensure that the yearlong version of this module is attached to the programme.
Financial and Economic Management	Review the volume of learning outcomes considering the credit weighting of this module.
Applied Measurement and Estimating	Consider how it can be ascertained that students have a sufficient knowledge of estimating on completion of this module.
Health, Safety & Site Management	Clarify in the module descriptor that health and safety content is looked at through a QS lens.
Project / QS Computer Applications	Consider including claims analysis on bill errors in this module.
Research Skills and Methodologies for Quantity Surveying	Incorporate this 0 ECTS module into another module as appropriate.
Placement Preparation	Incorporate this 0 ECTS module into the Industrial Placement module, noting on the APS that the preparation element occurs in the preceding semester.
Research Skills and Methodologies for Quantity Surveying 2	Rename the module to reflect that the students are completing a dissertation rather than learning research methodologies.
Sustainability and the Circular Economy	Review the hours for this module as 2 hours does not seem sufficient for a 10 ECTS module.

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Changes due to be implemented in:	
Changes to be implemented on phased or simultaneous basis:	
NB: If the programme changes are to be implemented simultaneously (all stages at once) then the Academic Information Systems Office must be notified immediately where modules have moved stages and an interim APS is required.	

9 Programme-Level Findings – Higher Diploma in Engineering in Building Information Modelling and Embedded Award

Consideration for the panel	Overall finding: Yes/No/Partially
Is there an ongoing need for the programme and has evidence been provided to support it?	Yes
Is the level and type of the award appropriate?	Yes
Are the entry requirements for the proposed programme clear and appropriate?	Yes
Is there a relationship between this programme and further education?	N/A
Are the access, transfer and progression procedures appropriate?	Yes
Does the programme comply with the Institute norms for retention, both in first year and subsequent years? Where not, does the Programme Board proactively take appropriate measures to optimise student engagement and retention?	Yes
Does the programme meet the required standards for programmes at its NFQ level (i.e., conform to GMIT Award Standards[6])? For Parent Award? For Embedded Award(s) (if applicable)? For Exit Award (if applicable)? For Minor Award (if applicable)?	Yes
Is the programme structure logical, well designed, and can the stated programme intended learning outcomes, in terms of employment skills and career opportunities, be met by this programme?	Yes
Have appropriate learning and teaching strategies been provided for the programme that supports Student Centered Learning (SCL)?	Yes
Have appropriate programme assessment strategies been provided for the programme taking account of the student workload?	Yes
Is there evidence that learning and teaching is informed by research?	Yes
Have appropriate quality management procedures been implemented in line with GMIT's Quality Assurance Framework? (e.g., Induction, Programme Handbook, Programme Board, Student Feedback, External Examiners)	Yes
Does the proposed programme demonstrate an international dimension? (e.g., content, mobility, collaboration)	Yes
Does the programme encompass sustainable development principles and ethos?	Yes
Does the programme embed employability through the inclusion of work placements, employment preparatory module(s) and/or work-based projects?	Yes
Is there evidence of strategies to promote diversity and inclusion?	Yes
Is entrepreneurship, creativity and innovation embedded in the programme?	Yes
Has the efficiency of the programme's design been considered? For example, does the programme meet the Institute norms on staff:student ratios for programmes of this type?	Yes
Is the programme externally facing? (e.g., Stakeholder engagement, guest speakers, fieldtrips, applied projects)	Yes

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[6] GMIT has adopted QQI's award standards which are available HERE.

Discussions with the Programme Board clarified that neither of the partner college who will make up the Atlantic Technological University with GMIT offer a similar programme. The programme was developed in response to an identified skills shortage with the cooperation of an industry partner. The programme has been successful in attracting Springboard funding and is the recipient of multiple awards.

It was clarified that in addition to being a separate module that sustainability is embedded in all modules.

The majority of students on the programme are mature and working in relevant areas. They have a strong work ethic and the Programme Board try to be as flexible as possible given the target cohort. Students are advised to take the programme over two years to ensure the workload is manageable as part-time students. Academic writing can be a challenge as participants are very practically oriented. While the research module has reduced in size it was emphasised that the standard expected has not diminished.

Numbers on the programme have declined. GMIT were early developers of the programme, but many other colleges now offer similar courses. Students also tend to apply to the Institute which has Springboard funding available. Whilst GMIT has developed a Masters programme in BIM it is not felt that this will impact on the numbers taking the Higher Diploma, as it targets a different market.

A detailed discussion took place on the difference between the new contractor and collaborations modules. The contractor module is about deliverables on site, data capture on site, health and safety on site, creation of safety file and handover to client. The collaborations module is more focussed on the design stage of projects. The lecturers involved have reviewed both modules to ensure that they don't overlap.

Only a few changes were recommended as the programme has recently gone through Differential Validation. These related to increasing the focus on collaboration and standards, the inclusion of a new module and noting of the transfer route following the Certificate programme. All changes as outlined in Appendix H were approved and the programme was accredited until the next programmatic review subject to the recommendations below.

Commendation(s):
1. Evidence of excellent relationship between students and academic staff. Students appreciated input into their studies
2. Impressed with the sustainability ethos, and principles of the programme
3. Impressed with support for student e.g., maths learning center, academic writing support
4. Department doing good job in relation to challenges in STEM cycle (attracting candidates, maths, writing.) staff aware of challenges, and proactive in dealing with them. Commended in overall approach to STEM challenges.
5. Innovative methods and approaches to range of assessment and feedback methods used across the programme

Condition(s):
1. Revise entry requirements to be Level 8 cognate or Level 7 cognate plus specified duration of relevant work experience. Clarify that GMIT's RPL policy can be used to demonstrate eligibility for entry to this programme.

Recommendation(s):
1. Clarify the sequencing of modules and delivery of same using a Gantt chart or similar.
2. Clarify the intended output of the programme – BIM Managers or BIM Coordinator.

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Changes due to be implemented in:	
Changes to be implemented on phased or simultaneous basis:	
NB: If the programme changes are to be implemented simultaneously (all stages at once) then the Academic Information Systems Office must be notified immediately where modules have moved stages and an interim APS is required.	

Validation Panel Report Approved By:

Signed:

_____

Dewar Finlay
Chairperson

Date:
8thJuly2022

Appendix A - Programme Board Members

The panel met with the following staff:

Name	Position
Prof. Graham Heaslip	Head of School of Engineering
Ms. Mary Rogers	Head of Building & Civil Engineering

Academic Staff Representatives Architectural Technology:

Mr. Jimmy Fahy	Ms. Fiona Watson	Ms. Emer Maughan
Ms. Irene Hayden	Mr. Andy McNamara	Ms. Breda Joyce
Dr. Alan Duggan	Mr. David Grimes	Ms. Denise Dillon
Mr. Gerard Nicholson	Mr. Gundo Sohn	Ms. Louise Tynan
Ms. Siobhaun Cawley		

Academic Staff Representatives Civil Engineering

Dr. Wayne Gibbons	Mr. Tommy Coyne	Dr. Jan Gottsche
Mr. David Bourke	Mr. Thomas Lyons	Mr. Andy McNamara
Dr. Mark Kelly	Ms. Jean Hughes	Ms. Lisa Dooley
Mr. Tommy Coyne	Dr. Shane Newell	Ms. Elisha McNamara
Dr. Noelle Jones	Ms. Fiona Watson	Ms. Breda Joyce
Ms. Louise Tynan	Mr. Malcom Hosty	

Academic Staff Representatives BIM

Dr. Wayne Gibbons	Mr. Jimmy Fahy	Mr. Gerard Nicholson
Dr. John Scahill	Mr. Andy McNamara	Mr. Tommy Coyne
Mr. Mark Costello		

Academic Staff Representatives Construction Management

Ms. Elisha McNamara	Dr. Jan Gottsche	Ms. Michelle Fahey
Mr. Tommy Coyne	Mr. Malcom Hosty	Ms. Louise Tynan
Mr. John Hanahoe	Dr. Noelle Jones	Ms. Fiona Watson
Mr. Tommy Coyne	Dr. Martin Taggart	Mr. Noel Crean

Academic Staff Representatives QS and Construction Economics

Mr. Thomas Murphy	Ms. Catriona O 'Regan	Mr. Noel Crean
Mr. Shane O'Grady	Mr. Thomas Lyons	Ms. Lisa Dooley
Ms. Siobhaun Cawley	Mr. David Bourke	Ms. Louise Tynan
Ms. Elisha McNamara		

Appendix B - Student Representatives

The panel met with the following student representatives:

Student Name	Programme	Stage
Ms. Kara Earle	Bachelor of Science (Honours) in Architectural Technology	3
Mr. Gary Leavy	Bachelor of Science (Honours) in Architectural Technology	4
Mr. Oliver Cleary	Bachelor of Science (Honours) in Architectural Technology	4
Ms. Lane Mooney	Bachelor of Science (Honours) in Architectural Technology	4
Mr. Oliver Cleary	Bachelor of Science (Honours) in Architectural Technology	4
Ms. Ellen Ward	Bachelor of Science in Architectural Technology	2
Mr. Shane Coll	Bachelor of Science (Honours) in Quantity Surveying and Construction Economics	4
Mr. Kevin Sweeney	Bachelor of Science in Quantity Surveying and Construction Economics	3
Mr. Shea O'Donoghue	Bachelor of Science (Honours) in Quantity Surveying and Construction Economics	1
Ms. Ali Fahy	Bachelor of Science (Honours) in Quantity Surveying and Construction Economics	1
Mr. Noel Donoghue	Bachelor of Science (Honours) in Quantity Surveying and Construction Economics	4
Mr. Cian Dolan	Bachelor of Science in Quantity Surveying and Construction Economics	2
Mr Enda Conaty	Bachelor of Science (Honours) in Construction Management	4
Mr. Keith Callahan	Bachelor of Science (Honours) in Construction Management	4
Ms. Emma Connolly	Bachelor of Engineering (Honours) in Civil Engineering	4
Mr. Mairtin O'Cualain	Bachelor of Engineering (Honours) in Civil Engineering	4

Appendix C - Schedule of Meetings

Agenda	
Date:	Monday, March 28th
9am	Panel Meet
9.45am	Parallel A: Civil Engineering Programme Board
9.45am	Parallel B: Architectural Technology Programme Board
11.45 am	Break
12 noon	BIM Programme Board
12.45pm	Lunch
1.30pm	Parallel A: Construction Management Programme Board
1.30pm	Parallel B: QS & Construction Economics Programme Board
3.30pm	Break
3.45pm	Meet with students (Panel will break into small groups to meet different cohorts of students)
4.15pm	Panel - Private Deliberations
5.00pm	Initial Feedback
The agenda may be subject to slight alteration on the day.	

Appendix D - Proposed changes for Bachelor of Science (Honours) in Construction Management and embedded Awards

Topic	Proposed Change	Rationale
Programme Learning Outcomes	Building Economics 1 CAD 1/ BIM Building Economics 2 Structural Design and Detailing Building Economics 3 Environment Management for Construction Building Performance and Technology Industrial Placement Resource Efficiency Strategies for the Construction Sector Construction Law and IR Development Evaluation	To reflect current practice/updated content
Overall Contact Hours		
Structure or Sequencing of Modules	Minor changes	
Addition of New Module(s)		
New APS Regulations		
Minimum Entry Requirements		
Changed transfer or progression routes		
Teaching & Learning Strategy	Financial and Business Management 1 Resource Efficiency Strategies for the Construction Sector Construction Law and IR Building Performance and Technology	To reflect changes made to LOs, syllabus and T&L strategies
Assessment Strategy	See below	
Module Changes	Minor changes including the following:	
Stage 1		
Structures for Construction	Increasing the CA marks from 30 to 40. Reducing the final exam from 70 to 60.	To acknowledge the workload, project and labs that the students complete during the Yearlong module.
Construction Technology 1	Removing renewable energy technologies Include PassiveHaus	This is covered in Building Services Included as a sustainable housing option
Learning Innovation Skills	Proposed Name change and updated syllabus.	
Land Surveying 1	Added co-ordinates and setting out Removed theodolite	To reflect updated content To accurately reflect the syllabus.
Mathematics Structures for Construction	Increasing the CA marks from 30 to 40. Reducing the final exam from 70 to 60.	To acknowledge the workload, project, and labs that the students complete during the Year long module.
Building Science and Materials	Edited gypsum plaster topic to include plasterboard. Removed 'particle boards' as this is covered as part of the timber topic. Added 'insulation'	To accurately reflect the lecture contents. To provide clarity as this is covered in other areas of the syllabus. To reflect updated content.
Stage 2		
Construction Technology 2	Remove renewable technologies Remove BREEAM and PassiveHaus Rename energy demand and occupant behaviour to Sustainable Construction	his is covered in Building Services BREEAM is covered in RE and Site Management modules. PassiveHaus in moved to CT1 module Sustainable Construction to include material selection and sustainable building
CAD/ BIM 2	Update module to reflect current and future industry requirements including continuing use of AutoCAD	To reflect current and future industry requirements
Land Surveying 2	Update syllabus	To reflect current practice
Structural Design and Detailing	Removed design of reinforced concrete columns.	Time constraints in module delivery resulted in omission of this section. Reinforced concrete design theory is covered adequately with beam and slab design. This material is complex and would require a significant amount of additional time to deliver it.
Integrated Project	Incorporate involvement of input from Construction Technology Module	Extend the range of inputs more widely in context of Y2 modules (more inclusive).
Stage 3		
Building Performance and Technology	Updated duration to 13 weeks	To reflect 1 semester delivery

Financial and Business Management 1	Proposed title change: Construction Finance and HRM	Title reflects updated syllabus.
Site Management 2	Update syllabus	To reflect current practice
Industrial Placement	Update syllabus	To reflect current practice
Innovation and Enterprise in the Built Environment	ncorporate theory from Stanford Design Thinking approach into the syllabus	Reflecting the increasing importance and prominence of Design Thinking in innovation.
Stage 4		
Resource Efficiency Strategies for the Construction Sector	Proposed module title change: Sustainability and the Circular Economy in the Built Environment	Title reflects updated syllabus.
Construction Law and IR	Safety Legislation section to include BCAR and workplace diversity. Updated Booklist and resources Coursework assessment breakdown changed Updated teaching and learning strategies to include Industry guest speakers.	
Development Evaluation	Syllabus updated to reflect changes in the Irish planning system & to explicitly include sustainability as it relates to the module content. Assessment changed Updated book list	To lessen the assessment load on students and to allow students to evaluate an issue(s)from different perspectives. This will allow for deeper learning.
Digital Systems	Consider an alternative module title to better reflect the module content e.g., Digital Construction Management	

Appendix E - Proposed changes for Bachelor of Engineering (Honours) in Civil Engineering and embedded Awards

Topic	Proposed Change	Rationale
Programme Learning Outcomes	Construction Technology and Building Services 1 Construction Management Law and Procurement 3 Infrastructural Engineering	reduced to 7; 3 for CT and 4 for BS reflect the inclusion of the private sector building and civil engineering works.
Overall Contact Hours	Some minor changes	
Structure or Sequencing of Modules	Some minor changes, Table 12.1 SER	
Addition of New Module(s)		
New APS Regulations		
Minimum Entry Requirements		
Changed transfer or progression routes		
Teaching & Learning Strategy		
Assessment Strategy	See table 12.1 stage 1. See table 12.2 stage 2 See table 12.3 stage 3 See table 12.4 stage 4	
Module Changes		
Stage 1		
Mathematics for Civil Engineering 1	Change of name and code: MATH06048 Mathematics for Civil Engineering 1	Clarity for student
Surveying for Civil Engineering	Introduction and application of the dual grade laser level added.	This equipment is the industry standard for setting out levels
Construction Technology and Building Services	Expanded the description nZEB added Added Building Regulations Added Acceptable Construction Detail. Made the Learning Outcomes broader / less prescriptive, thereby improving the flexibility in the syllabus to be delivered. A link to the Building Regulations (DoE) website is added to the booklist. Out of date books removed	To provide prospective or current students with a more detailed overview of the module. To reflect the most up-to-date building standards To better present links between Regs and Construction Details and to introduce BCAR's To reflect the most up-to-date Building Reg. requirements with regards to Airtightness and thermal performance Previously 9 LO's in total for this module – now reduced to 7; 3 for CT and 4 for BS To reflect the most up-to-date building standards
Structural mechanics	Expanded the description Assessment From 30 /70 to 40 / 60 CA/FE	To provide prospective or current students with a more detailed overview of the module To improve engagement during the academic year and reduce over-assessment.

Construction Materials and Concrete Technology	Edited Gypsum plaster topic to include plasterboard. Removed 'particle boards' as this is covered as part of the timber topic. Removed 'Added mineral constituents, origin, properties and benefits.' Removed 'Adjustment to design mixes to allow for aggregate moisture and use of added mineral constituents.' Removed 'quality control and statistics applied to concrete production.' The topic of soils will still be covered in the lectures, but the soils practical has been removed and moved to Year 2 Construction Technology (Ground Engineering). Added 'presentation' and 'MCQs' as assessment strategies Changed weekly lab reports to submittal of a lab book for each semester.	To accurately reflect the lecture contents. To provide clarity as this is covered in other areas of the syllabus. To provide clarity as this is covered in other areas of the syllabus. To provide clarity as this is covered in other areas of the syllabus i.e. 'design of concrete mixes.' To provide clarity as this is covered in other areas of the syllabus i.e. 'quality control' and 'Aggregates.' To allow for the additional testing of materials as part of the practical lab work such as timber and steel. Broaden students' skills for presenting. MCQs completed on Moodle as part of a blended learning approach. To accurately reflect current practice.
Engineering Science and Chemistry	Changing syllabus to include elastic modulus, shear modulus and Poisson's ratio	These are the three principal properties of materials. This material is complimentary to material covered in 'Structural Mechanics' and 'Materials and Concrete Technology' module
	2-hour lectures weekly and 2-hour lab (fortnightly). No change to contact hours	Changed from two-hour lab and one hour lecture weekly. Two-hour lecture required. One for engineering science and one for chemistry
	Continuous assessment (Project + CA) 20 % Practical 30% Final Exam 50 %	To allow more marks for continuous assessment and practical work
Mathematics for Civil Engineering 1	New code MATH06048	Clarity for student
	Continuous assessment 40% Final Exam 60%	Reflect more emphasis on formative student learning and engagement from the start of academic year
	Included sustainability examples	Enhance student experience of practical mathematical principles
	Included online and face to face lectures	Experience shows this works well for mathematics learning
Stage 2		
Infrastructural Engineering	Expanded the description	To provide prospective or current students with a more detailed overview of the module.
	Replaced verbs to action verbs in accordance with Bloom's Taxonomy	Complies with Bloom's Taxonomy recommendations
	Under Structural Design of Pavement thicknesses, LR1132 and Road note 29 have been replaced by DMRB HD 24, HD 26 and HD 36	They are the most up to date standards for the design of Flexible Pavements.
	DMRB HD 25 has been added.	It is the most up-to-date standard for the design of Pavement Foundations
	Removed the following: Leak Detection and Metering, Dam and Pumping Station	Insufficient time to cover in 2 hrs per week

		Construction, Bridge Construction and Tunnelling	
		Removed the following: Economic Appraisal, Cost-Benefit Analysis	This material was moved into 4th Year Integrated Project
		Added the following: Pipe Materials, Traffic Assignment and Trip Generation	Pipe Materials: Required for the teaching of stormwater, wastewater and water supply management systems Traffic Assignment and Trip Generation: Required for the teaching of Traffic Analysis
		CA/FE Breakdown changed from 40/60 to 45/55	Due to changes to the CA elements described below.
		Percentages for CA elements changed as follows: Stormwater Group Project: 10% to 5% Water Supply Group Project 10% to 5% Road Scheme Appraisal Group Presentation: 10% to 5% In-class assessment changed to 6 x Moodle Quizzes: 10% to 30%	Better reflection of the workload for each element
	Surveying for Structural Engineers	Changed the setting out of curves and buildings from 'theodolite and tape' to the use of a total station.	To reflect the modern methods of setting out using a total station.
		Added names of equipment 'automatic level, total station and laser level.'	To accurately reflect the equipment used during the practical.
	Geomechanics and Ground Construction Technology	Soil stabilization and sustainable development	Update the module
		2 hours lectures + 1.5 hours laboratory and tutorials	Same contact hours are used but changed from three hours lecture and half an hour lab and tutorial weekly to 2 hours lectures and 1.5 hours lab and tutorial weekly as more time is needed for the labs and tutorials.
	Mathematics for Civil Engineering 2	MATH07008 Mathematics for Civil Engineering 2	Clarity for students
		Continuous assessment 40% Final Exam 60%	Reflect more emphasis on formative student learning and engagement from the start of academic year
		Included sustainability examples	Enhance student experience of practical mathematical principles
		Included online and face to face lectures	Experience shows this works well for mathematics learning
Stage 3			
	Hydraulics 1	Project and Course work 30 % Final Exam 70 %	The rationale for this change was to reduce the workload to the students during term time.
		Updated	The recommended Reading List is changed
	Public Health Engineering	Remove reference to biological treatment of municipal waste under Waste Management.	Time limitation in delivering the module.
		Included online and face to face lectures	Experience shows this works well for mathematics learning
	Mathematics for Civil Engineering 3	Change of name: MATH7009 Mathematics for Civil Engineering	Clarity for students
	Construction Management Law and Procurement	Slight adaptation of learning outcomes no 1,3,4,5,6 &7.	These outcomes have been adapted to reflect the inclusion of the private sector building and civil engineering works. In addition, the language has been updated to reflect specific building and civil engineering projects. The rationale for these changes is that due to the placement in the second part of the year, students are working in both the public and private sector.
		The assessment break-down will change from 50/50 to 40/60.	The rationale for this change is that due to the module being of 13 weeks only, the CA element of 50% was very challenging for the students in terms of workload and content.
Stage 4			
	Hydraulics	Name change to Hydraulics 2	The description is rewritten to better describe the course. This module builds on

		Hydraulics 1 in Stage 3.
	Project and Course work 30 % Final Exam 70 %	
	Updated	The recommended Reading List is changed
Engineering Hydrology		The description is rewritten to better describe the course.
	Hydrological modelling	Introduced to teach flood modelling
	Project and Course work 30 % Final Exam 70 %	The SuDs topic was introduced into the module and there was an assignment assigned to this. Hence the marks needed to be adjusted.
Environmental Engineering	Remove reference to "IPPC and Kyoto Protocol" and replace with "Current national and international climate change policy and legislation". Include "Appraisal of the effectiveness of Ireland's National Climate Action Plan."	Update is more relevant
Integrated Project	Expanded the description	To provide prospective or current students with a more detailed overview of the module.
	Increased from 15 to 20	To better reflect the workload required for the large number of assignments in the module
	Reduced from 7 to 6	Amalgamated 2 LO's (No 1 & 6) as there was some duplication between them
	Changed by adding 1 tutorial hour to the 3 Lecture Hours	In order to have students working in small class groups to facilitate Academic Writing exercises, encourage discussion and provide individual and group feedback.
Energy and Environmental Sustainability	Some content removed.	It overlaps with other modules and where it originated in the old "Year 5" syllabus.
	Module delivery to be reduced to 3 hours per week (down from 4)	Where overlaps are eliminated and the syllabus is updated, overall contact can be reduced.
Advanced Civil Engineering Software	Module delivery to be reduced to 5 hours per week (down from 6).	This is to reflect that the Revit component is now being partially addressed in the current Year 2 delivery, which was not the case when the current Year 4 was developed.
	Module credits to be reduced to 5 (down from 10).	This is to reflect a more "continually assessed" approach using in-class assessments. This is a shift away from the previous approach which was based around report writing. The module requires less out of contact hours than in the past, and so the credit weighting can be reduced.
		A second reason for reducing the credits to 5 is to allow for the introduction of a new (5 credit) module into the stage.

Topic	Proposed Change	Rationale
Programme Learning Outcomes	Addition of 'freehand drawing' to Learning Outcome No 3 Comprehensive application of freehand drawing, CAD and BIM as analytical, research and design tool	Programme LOs updated to incorporate freehand drawing as it is a core skill for an Architectural Technologist and a key requirement under the QQI Standard for Architectural Technology
	Rewording of Learning Outcome, No 5 to remove reference to dissertations Use research, analytical knowledge and programming to inform technical solutions for reports and project work and dissertations	Dissertations have been replaced by Technical Design Reports
Overall Contact Hours	Semester 5: 4 additional contact hours Semester 6: reduced to will be reduced by 0.33 hours on account of the proposed placement module	to prepare students for placement. Introduction of industrial Placement module in Semester 6 requires readjustment of contact hours in Year 03. Additional hours will be required in Semester 5 to prepare students for placement. These hours are allocated to a placement preparation module, Advanced Architectural Technology and Professional Practice and Law
Structure or Sequencing of Modules	History of Architecture 1 (Irish History) to be combined with Conservation and delivered in Year 2 of the programme History of Architecture 2 to be split from Conservation and History of Architecture 2 to move to Year 1. Module to be renamed as History of Western Architecture	The syllabus content for Irish history and Conservation are better aligned than International History and have better synergies between them for a 5-credit module.
Addition of New Module(s)	Placement* Preparation Year 4	To support students prior to commencement of placement
New APS Regulations	There are no new APS regulations proposed	
Minimum Entry Requirements	There are no new entry requirements proposed	
Changed transfer or progression routes	There are no proposed alterations to transfer or progression routes	
Teaching & Learning Strategy	The introduction of an industrial placement module in Year 3	See Table below for details
Assessment Strategy	Some modules have changed the breakdown of assessments between exam and CA – see table below for details. Details of changes to assessment strategies are outlined in detail in Section 9.3	
Module Changes		
Stage 1		
Detail and Design Studio 1	Changes to reading lists Learning outcomes updated to reflect QQI standards	To align with QQI Architectural Technology Awards Standards Updated reading list
Architectural Technology & Services 1	Architectural Technology project work to be streamlined with studio CA project work using joined submissions. Project-based learning and varied assessment typologies in Architectural Technology (30% each semester); final exam (20%) and CA (20%) unchanged in Services Review module learning outcomes to ensure that the active verbs used are appropriate. Consider the rationale for the inclusion of a final examination with such a low weighting. A project may be a better alternative.	To reduce over assessment and streamline delivery
CAD 1	Changes to sequence of Revit / CAD delivery	Allow students to be proficient at Autodesk Revit by the start of Year 2. This means students can complete their DDS 2 project through Revit further reducing overassessment and increasing the collaboration between CAD / BIM and DDS. This will also improve students Revit and BIM skills prior to starting work placement
LIS	Potential change to module name to Academic and Professional Skills and update LO's to better reflect student requirements for college and career development.	Common Module across all first-year programmes in GMIT. This module may be replaced by a new Module Academic and Professional Skills. This is currently up for validation with the PAC
Mathematics	Mathematics Change of weighting for CA to 50%	To enable students, improve learning During lockdown a 50/50 split was created, and it has proven to work very well for students.
Architectural Graphics and Communication 1	Linked to Studio project to produce presentation drawings with linked assessment Module duration should read 26 weeks. Review volume of learning outcomes for this module given the credit weighting of the module.	To support studio module and to reduce over assessment

Construction Materials	Edited 'Gypsum' plaster topic to include plasterboard. Removed 'particle boards' as this is covered as part of the timber topic Added 'presentation' and 'MCQs' as assessment strategies Changed weekly lab reports to submittal of a lab book at the end of the semester	To accurately reflect the lecture contents. To provide clarity as this is covered in other areas of the syllabus. Broaden students' skills for presenting. MCQs completed on Moodle as part of a blended learning approach. To accurately reflect current practice.
History of Western Architecture	Introduction to international history of architecture in Year 1 before students focus on History of Irish Architecture in Year 2

This module should be consistently presented as semesterised. | The syllabus content for Irish history and Conservation are better aligned than International History and have better synergies between them for a 5-credit module. |
Academic and Professional Skills Y1	The yearlong version of this module should be attached to the programme.	
Detail and Design Studio 2	Updated reading list, updating LO's to align with QQI	To align with QQI Architectural Technology Awards Standards
Architectural Technology & Services 2	Reduced CA and streamline mapping to Module Los

Review module learning outcomes to ensure that the active verbs used are appropriate. Consider the rationale for the inclusion of a final examination with such a low weighting. A project may be a better alternative. | To stop over assessment

removal of RC structural design and preparation for Studio in year 3 to prevent duplication with structures modules' proposed changes |
CAD 2 / BIM	Changes to sequence of Revit / CAD delivery	Allow students to be proficient at Autodesk Revit by the start of Year 2. This means students can complete their DDS 2 project through Revit further reducing overassessment and increasing the collaboration between CAD / BIM and DDS. This will also improve students Revit and BIM skills prior to starting work placement
Architectural Graphics and Communication 2*	Existing module on APS to be made mandatory rather than an elective	To support studio module To allow for introduction of digital presentation skills In response to stakeholder feedback
History of Architecture (Irish) & Conservation*	Realignment of existing history modules to include Irish Architectural History with Conservation	Better synergies between Irish History and Conservation than previous module
Building Surveying	Updating LO's to align with QQI	To align with QQI Architectural Technology Awards Standards
Structural Element Design	Addition of RC Project. Changing from 40/60 CA/FE to 100% CA:	Timber and Steel Design currently covered extensively; RC theory but not design and detailing not covered. Improves engagement during the academic year and reduces over-assessment.
PAL Leadership (PASS)		Common Module in GMIT. Proposed changes to this module are currently up for validation with the PAC
Stage 3		
Detail and Design Studio 3	Reduction in Credits for DDS3, rewording of LO's to match QQI	To allow for introduction of placement module
Placement and

Placement Preparation | Introduction of placement module Year 3

Integrated in placement module above | To improve employability of graduates

To improve Industry engagement

Current best practice

To respond to students', graduates', and employers' feedback

To support students prior to commencement of placement |
Advanced Architectural Technologies	Reduction in Credits for AAT3	To allow for introduction of placement module
BIM 3	Reduction in Credits for CAD/BIM 3, Change title of CAD/BIM 3 - BIM 3 and adjust LO's and content	To allow for introduction of placement module
Environmental Building Systems	Reduction in Credits for EBS	To allow for introduction of placement module
Professional Practice and Law 3	Reduction in Credits for PP & L Revision of LO's to align with QQI Final Exam / Continuous Assessment ratio changed from 60:40 to 50:50	To allow for introduction of placement module Revision of LO's to align with QQI Assessment strategy revised to reflect 5 credit modules

	The law element of this module should be more directly focussed on construction.	
Stage 4		
Detail and Design Studio 4	Detail Design Studio 4 - changes to reading list, changes to LO's to match QQI Consider aligning this project with the QS students to cost the building designs.	To align with QQI Architectural Technology Awards Standards Updated reading lists
Innovative Architectural Technologies	LO's updated	To align with QQI Architectural Technology Awards Standards
BIM 4	Change LO's and content and change title of BIM 4 Architecture to BIM 4	Change learning outcomes and content to reflect what's been asked for in industry
Professional Practice: Contract and Procurement	Professional Practice Contract and Procurement - Changes to LO's, updated and more detailed inclusion of Health and Safety requirements, regulations, and responsibilities of Duty holders	To align with QQI LOs and updated Built environment legislation and learning lists.
Technical Design Report	Technical Design Report - minor amendments to LO's & revised reading list	To update reading lists

Appendix G - Proposed changes for Bachelor of Science (Honours) in Quantity Surveying and Construction Economics and embedded Awards

Topic	Proposed Change	Rationale
Programme Learning Outcomes		
Overall Contact Hours	No overall change-see below	
Structure or Sequencing of Modules	adjustment in Stage 2-reduce 'cost studies 1' by 1 hour and increase 'construction Technology 2' by 1 hour	
Addition of New Module(s)		
New APS Regulations		
Minimum Entry Requirements		
Changed transfer or progression routes		
Teaching & Learning Strategy		
Assessment Strategy		
Module Changes		
Stage 1		
LIS	Change name to Academic and Professional Skills Ensure that the yearlong version of this module is attached to the programme.	
Financial and Economic Management	Review the volume of learning outcomes considering the credit weighting of this module.	
Environmental Management for Construction,	change name to Procurement Studies	Addressed from a client, main contractor and sub-contractor
Procurement and Contract Administration	change name to Contact Accounts Administration	Addressed from a client, main contractor and sub-contractor
Stage 2		
Health, Safety & Site Management	Clarify in the module descriptor that health and safety content is looked at through a QS lens.	
Project / QS Computer Applications	Consider including claims analysis on bill errors in this module.	
Stage 3		
Contracts (private sector)	include the new private sector contract (PFC)	
Placement Preparation	5 credits included in Work Placement in semester 6 Incorporate this 0 ECTS module into the Industrial Placement module, noting on the APS that the preparation element occurs in the preceding semester.	

Research Skills and Methodologies for Quantity Surveying	5 credits included in Work Placement in semester 6 Rename the module to reflect that the students are completing a dissertation rather than learning research methodologies	
Stage 4		
Sustainability and the Circular Economy 4	Review the hours for this module as 2 hours does not seem sufficient for a 10 ECTS module.	

Appendix H - Proposed changes for Higher Diploma in Engineering in Building Information Modelling

Topic	Proposed Change	Rationale
Programme Learning Outcomes	There is no change in the Programme Learning Outcome	
Overall Contact Hours	There is no change in the Overall Contact Hours	
Structure or Sequencing of Modules	BIM Collaboration will transition from being a semester long module to a yearlong module.	It became clear from the graduate and employer surveys that more of an emphasis needs to be put on the collaboration and standards aspects of BIM. This module will transition from a single semester, 10 credit module to a 20-credit yearlong module
Addition of New Module(s)	BIM Contractors Sustainable building and energy simulation	This new module was created following demand from industry.
New APS Regulations	There is no New APS Regulations proposed	
Minimum Entry Requirements	There is no change to the Minimum Entry Requirements	
Changed transfer or progression routes	Certificate in Engineering in BIM	Students can progress to semester 3 of the programme after completing GMIT's Level 8 Certificate in Engineering in BIM
Teaching & Learning Strategy	There is no change in the Teaching & Learning Strategy	
Assessment Strategy	There is no change to the Assessment Strategy	
Module Changes		
BIM Virtual Modelling Fundamentals	No changes since Differential Validation in 2021	
BIM Collaboration	Increase in APS Credits (10 credits to 20 credits) Learning outcomes refined and rephrased Minor syllabus adjustments Minor adjustment to CA% breakdown Bibliographies/ booklist updated	BIM collaboration assessments per ECTS credit was not well balanced and the need for change was apparent during this review. Making the module yearlong will allow the student more time to complete the CA and allow us to deliver the module to a higher quality.
BIM Research Project	Reduction in APS Credits (30 credits to 20 credits) Learning outcomes refined and rephrased Minor syllabus adjustments Minor adjustment to CA% breakdown Bibliographies/ booklist updated	The BIM Research Project module originally required participants produce a comprehensive academic thesis in the order of 15,000 words. For many participants, this was a significant undertaking which was heavily focused on theory. With the advent of more professional journals in the area of BIM, there is an opportunity at this point to redirect the research to more closely align with the requirements of academic and/or professional journal articles. The proposed changes to the BIM Research module reflect a shift in emphasis towards a practical output, relevant to the participants own career aspirations. To this end, the 15,000-word thesis has be replaced with a 5,000 to 7,000 word dissertation. This substantially reduces the workload, while maintaining scope to include primary research, secondary research and a synthesis between the two."
BIIM Contractors	New Elective	Currently, the Higher Diploma in BIM is coordinating with all design disciplines within the construction industry, from Architectural, Civil and Structural to Mechanical and Electrical, the final stage in the Process of BIM is to move from Design to the Construction phase and Handover. With the BIM capability of the Construction industry in Ireland maturing, the focus is moving towards a more coordinated and structured handover. Employers and Clients now expect more from their construction teams, with better records and structured searchable data, which stretches throughout the full lifecycle of the building.
		This module will further enhance the students learning and closes the life cycle of a building from concept to the Handover/Operation of a building. The Building Information Modelling Contactors module is aimed at the main contractor and the Tier one contractors more specifically the subcontractors. The focus will be on the "I" in BIM meaning Information and how this information is captured, classified, and structured. It is envisaged that this will attract a large portion of small to medium size business that are struggling to keep their skill set up to date with an ever-increasing demand on labour and time.
Sustainable Building and Energy Simulation	New Elective	Introduced to prepare students for sustainable building design practice and decision-making in the context of climate change and sustainable development goals.