

Report of Validation Panel

Date of Meeting: 10/5/2019

Award Type:	Bachelor of Science Honours
Programme Title:	Bachelor of Science (Hons) in Building Information Modelling and Management
Award Class:	Major
NFQ Level:	Level 8
Intakes Commencing:	September 2019
ECTS/ACCS Credits:	60
Embedded Award:	Yes Minor Award Certificate in Building Information Modelling Technologies

PANEL MEMBERS

Name / Function / Institution
Chairperson: Mr Brian Dempsey, Lecturer, Dept of Architecture, Waterford IT
Prof Mark Richardson, Emeritus Professor, University College Dublin
Mr Dave Cotter, Regional Manager, John Sisks & Sons
Mr Brendan Price, Technical Director, RPS Consulting Engineers
Prof Ger Kelly, Head of Mechanical Biomedical and Manufacturing Engineering, CIT

PROPOSING TEAM MEMBERS

Name / Function / Department
Ted McKenna, Lecturer & Programme Coordinator, Dept of Civil, Structural & Environmental Engineering
Desmond J. Walsh, Head of Department of Civil, Structural & Environmental Engineering
Dr Joseph Harrington, Head of School of Building and Civil Engineering
Michael Otreba RPS
Laura O Connell, Adjunct Faculty
Mr Mark O'Brien, Adjunct Faculty
Kieran Ruane, Lecturer CIT
Dr Mary Moloney Lecturer CIT
Dr Vesna Jasic Lecturer CIT
Mr Leonard O Driscoll, Lecturer CIT
Mr Sean Carroll, Lecturer CIT

BACKGROUND TO THE PROPOSED PROGRAMME

The School of Building & Civil Engineering proposes a new Level 8 BSc (Hons) in Building Information Modelling and Management to commence in the Department of Civil, Structural & Environmental Engineering in September 2019.

In 2015, in response to a Springboard demand, the Department of Civil, Structural and Environmental Engineering developed a three module, 15 credit, Level 7 Special Purpose Award (SPA) Certificate in Building Information Technologies. The inaugural delivery of the programme comprised a blended Springboard and CPD offering. The programme continues to enjoy significant support from industry offering upskilling opportunities for graduates in this fast emerging sector. Industry based Adjunct Faculty and guest lectures have been a feature of the programme.

In December 2018, the Department applied for, and received permission, from the Registrar's Office to develop a BSc (Hons) in Building Information Modelling and Management programme which will build in the success of the SPA programme. The proposed BSc(Hons) will meet a specific and identified CPD need from industry and will provide a progression pathway for Level 7 students within the School of Building and Civil Engineering and potentially from within the Faculty.

Findings of the Panel

*NOTE: In this report, the term “**Requirement**” is used to indicate an action or amendment which in the view of the Panel **must be undertaken** prior to commencement of the programme, as a **condition of validation**.*

*The term “**Recommendation**” indicates an item to which the Institute, academic unit or programme board should give serious consideration. Normally it is expected that recommendations will be implemented as soon as possible. Progress will be monitored and will be discussed in programmatic review.*

The Panel has considered the documentation provided and has discussed the programme with the proposers. Based on this, the Panel has arrived at a number of Findings, Requirements and Recommendations as follows.

1. Programme-Level Findings

1.1 NEED FOR THE PROGRAMME

Validation Criterion: Is there a convincing need for the programme with a viable level of applications?

Overall Finding: Yes

Findings: The need for the proposed BSc(Hons) in Building Information Modelling and Management was clearly articulated and substantiated based on Future of Jobs 2016 report at an international level and nationally with reference to the National BIM Council published Roadmap to Digital Transition for Ireland's Construction Industry 2018-2021.

Requirements: None

1.2 AWARD

Validation Criterion: Are the level and type of the proposed award appropriate?

Overall Finding: Yes

Findings: The Level 8 Award represents an appropriate advancement for cognate Level 7 graduates of other programmes in the Architecture, Engineering and Construction sectors. A BSc (Hons) award is proposed as the programme outcomes align more closely with QQI award standards for a Level Science award rather than the design focused programme outcomes of a Level 8 Engineering award.

Requirements: None

Recommendations: None

1.3 LEARNING EXPERIENCE

Validation Criterion: Is the learning experience of an appropriate level, standard and quality overall?

Overall Finding: Yes

The proposed Programme Outcomes as presented to the Panel are attached as Appendix 1.

Findings: The candidates will be immersed in an active learning environment with over the course of the 4 semester programme where candidates progress from “identify” and “develop” to “apply”, “synthesise” and “critically evaluate” at both collaborative or group level and as individual learners. The graduate of this programme will be competent to develop effective team dynamics, apply lean processes, and leverage digital technology in the execution of projects typical of the AEC sector. He/she will have acquired a broad and general appreciation of the multidisciplinary nature of AEC projects as well as a thorough insight into the special features of effective collaboration and information management.

The Panel are confident that this programme has the potential to serve a demand for up-skilling in the discipline of Building Information Modelling. The programme modules have the potential to be delivered on-line which would prove attractive in the context of the workforce up-skilling which has been identified.

Requirements: None

Recommendations: None

1.4 PROGRAMME STRUCTURE

Validation Criterion: Is the programme structure logical and well designed (including procedures for access, transfer and progression)?

Overall Finding: Yes, subject to certain Requirements and/or Recommendations

Findings: The programme structure has been carefully designed, in particular in the four semester part time delivery mode, to deliver an active learning environment for the candidates on the programme. A

balance has been struck between direct teaching, group activities and individual learning across the four semesters of the programme. Based on the quality of the modules contained within the programme, the panel consider that graduates of this programme are well equipped to progress to a level 9 in an appropriate discipline. The panel were concerned with the wording under the admission criteria and propose an alternative wording to ensure admission of suitably qualified candidates.

Requirement: Replace wording “Equivalent recognition may be given through the Recognition of Prior Learning (RPL) process on an individual case-by-case basis to candidates who have not achieved this academic standard but who can demonstrate significant relevant professional experience.” With (RPL) process on an individual case-by-case basis to candidates who have achieved the equivalent of this academic standard by a combination of demonstrable academic attainment and relevant professional experience.

Recommendations: None

1.5 PROGRAMME MANAGEMENT

Validation Criterion: Are the programme management structures adequate?

Overall Finding: Yes

Findings: One of the critical elements in any major award is the capstone project. The Department have for many years managed capstone projects at both Level 8 and Level 9 including the capstone project (L8) or thesis (L9) for both full time and part time learners enrolled in their programmes. The programme team have identified staged milestones to facilitate development of the capstone project, and have the necessary procedures in place to provide guidance and support whilst ensuring the quality of the project submissions.

Requirements: None

Recommendations: The panel recommends that a clearly defined assessment matrix be published for each semester and in particular semester 1 of the programme.

1.6 RESOURCE REQUIREMENTS

Validation Criterion: Are the resource requirements reasonable?

Overall Finding: Yes

The Panel was assured on behalf of the President and Head of Faculty/College/School that appropriate resources in terms of staffing and facilities will be put in place when the programme is validated.

Findings: The programme department has comprehensive resources and laboratories to support the blended learning mode and experience for the learner. In particular, the panel noted and commend the significant benefit accruing to the learners from the size and quality of the multidisciplinary and interdisciplinary lecturing faculty in partnership with cutting edge practitioners at adjunct faculty level.

Requirements: None

Recommendations: None

1.7 IMPACT ON THE INSTITUTE

Validation Criterion: Will the impact of the programme on the Institute be positive?

Overall Finding: Yes

Findings: The programme will provide a path way for existing cohorts of students. It will also attract significant cohorts of additional candidates, currently in the AEC sector who wish or need to upskill to keep current or at pace with significant development in digital design. It will provide CIT with a niche specialism and first mover advantage in a new and developing technological space. The proposed course will further strengthen the developing synergies between the School of Building & Civil Engineering and industry.

Requirements: None

Recommendations: None

2. Module-Level Findings

The Panel notes that modules FREE6001, INTR6021, INTR7018, INTR7019, INTR8028, DESI8018, INTR8015, INTR8016, on the proposed programme are pre-approved modules which may be delivered across several CIT programmes.

The Panel was informed that the new draft modules (Virtual Design and Construction & Project BIM + BIM) have been the subject of internal and external scrutiny by the CIT module moderator and external reviewers Dr. Dominic O’Sullivan (UCC) and Mr. Michael Minehane (RPS) at a previous review stage. New draft module AEC Project and Contract Management is a module on the BEng (Hons) in Structural Engineering programme and it is being reviewed as part of the current programmatic review process.

2.1 ALL MODULES

Requirement: Any revisions to Module Descriptors or Semester Schedules made to address the recommendations and requirements in this validation panel report require sign-off from the CIT Module Moderator and the Registrar’s Office prior to approval by the CIT Academic Council.

The panel were happy with the modules as presented.

3. Other Findings

Commendations. The panel wish to commend the programme department as follows

- (1) The comprehensive documentation submitted for the evaluation and for the robust defense of their programme
- (2) The quality and scale of the adjunct faculty ensuring that the programme will remain current and agile with the ability to respond quickly to best practice nationally and internationally.
- (3) The incorporation of the module DESI8018 Design Thinking for BIM, which aims to provide the learner with the necessary knowledge and skills to apply a design thinking methodology within a Building Information Modelling (BIM) context
- (4) The timeliness and appropriateness of the programme, nationally.

4. Conclusion

Based on the above findings, the Panel has arrived at the following Conclusions:

- The Programme meets the required standards for an award in its field of study at Level 8 of the National Framework of Qualifications.
- The Programme meets the criteria for validation of a new programme adopted by the Academic Council of Cork Institute of Technology.

The Panel therefore recommends that the Programme be validated for five academic years, or until the next programmatic review, whichever is soonest, subject to implementation of the Requirements above, and with due regard to the Recommendations made.

Implementation of Requirements and Recommendations

NOTE: This section is co-completed by the Academic Department and the CIT Registrar's Office.

It records the implementation of any panel requirements and the completion of the internal programme and module moderation process. Confirmation of completion by the CIT Registrar's Office is required for both before the programme is submitted to the CIT Academic Council for validation.

1. IMPLEMENTATION OF PANEL REQUIREMENTS

Requirement(s)	Department Response
1.4 (Admission Criteria)	Accepted
2.1 (Module Moderator & Registrar's Office)	Work has been completed in conjunction with the Module Moderator/Registrar's Office in recent weeks. This has included the introduction of a 10 credit module to replace 2x5credit Collaborative BIM modules in semester 1.

Recomendation(s)	Department Response
1.4 (Assessment)	A detailed assessment matrix has been developed, particular emphasis and detail provided for semester 1

2. SIGN-OFF ON FINAL PROGRAMME SPECIFICATION (INCLUDING MODULES)

<p>The CIT Registrar's Office confirms that:</p> <ul style="list-style-type: none"> • The Programme and Module Moderation Process for this proposed programme is complete; and • The final Programme Specification and associated Module Descriptors are deemed ready to be submitted to Academic Council for approval.
