GMIT
INSTITIÚID TEICNEOLAÍOCHTA NA GAILLIMHE-MAIGH EO
GALWAY-MAYO INSTITUTE OF TECHNOLOGY

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

Named Award:	Bachelor of Science
Programme Title(s):	Bachelor of Science in Computing in Software Development Bachelor of Science (Honours) in Computing in Software Development (1 year add-on) Bachelor of Science (Honours) in Computing in Software Development (Four year ab initio degree)
Exit Award(s):	None
Award Types:	Ordinary Degree, Honours Degree
Award Class:	Major
NFQ Levels:	Level 7 and Level 8
ECTS / ACCS Credits:	Level 7 – 180; Level 8 (add –on) 60; Level 8 (ab initio 4 year) 240
Location:	Galway
Minor Awards:	None

Panel Members

Name	Position	Organisation
Dermot Douglas	Chair	Higher Education Consultant
Seamus Lennon	Secretary	GMIT
Bryan Duggan	IOT Member	DIT
Michael Lang	University Member	NUIG
John Gavin	Professional Practitioner	Hewlett Packard
Angela Forde	Institute Graduate	Open Jaw Technologies

Programme Board Team

Sabrina Kirrane	Valerie Butler	Damien Costello
Gabriel Hicks	John Healy	Naomi Hurley
Annette Cosgrove	Liam og Kissane	Gerry Agnew
Des Foley	Deirdre O'Donovan	Michael P. Fitzgerald
John Farrell		

1 Introduction

The following report to Academic Council is a validation panel report from an expert panel of assessors on:

Bachelor of Science in Computing in Software Development
Bachelor of Science (Honours) in Computing in Software Development (1 year add-on)
Bachelor of Science (Honours) in Computing in Software Development (Four year ab initio degree

The report is divided into the following sections:

- Background to Proposed Programme
- General Findings of the Validation Panel
- Programme-Level Findings
- Module-Level Findings

2 Background to Proposed Programme

See Programme Self Evaluation Report (SER) for more detailed information.

3 General Findings of the External Peer Review Group

Following discussions the External Peer Review Panel have decided to approve the programmes with two conditions and some recommendations.

The panel approve the validation of the current level 7 and 1 year add-on Level 8 programmes and agree to changes of updated modules and new module titles proposed.

The panel support the proposed ab initio Level 8, entirely based on the above programmes.

Condition(s):

- The panel formally request the programme board forensically edit and correct the programme schedules in terms of typographical errors and omissions in content.
- The panel formally requires the programme board to map the programme learning outcomes to the QQI National Standards for Computing, at each of the appropriate levels. This information needs to be made available to each member of the panel.

Having considered the documentation provided, and having discussed it with the programme development team, the External Peer Review Group recommends the following:

Bachelor of Science in Computing in Software Development.
Bachelor of Science (Honours) in Computing in Software Development (1 year add-on)
Bachelor of Science (Honours) in Computing in Software Development (Four year ab initio degree)

Place an x in the correct box.

Accredited for the next five academic years or until the next programmatic review, whichever occurs sooner	
Subject to conditions and recommendations, the three programmes listed above be accredited for the next five academic years or until the next programmatic review, whichever occurs sooner	X
Re-designed and re-submitted to the same External Peer Review Group after additional developmental work	
Not Accredited	

Note:
Approval is conditional on the submission of a revised programme document that addresses all conditions and takes account of the recommendations outlined below. A response

document describing the actions of the Department to address the conditions and recommendations made by the External Peer Review Group (EPRG)must be agreed by the External Review Panel. 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 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.

4 Programme-Level Findings

This section of the report addresses the following programme level considerations:

- Evidence of reflection by the programme board to include, where relevant evidence of collaboration and engagement with other programmes from a similar discipline area within GMIT
- Demand
- Award
- Entry requirements
- Access, transfer and progression
- Retention
- Standards and Outcomes
- Programme structure
- Learning and Teaching Strategies
- Assessment Strategy
- Resource requirements
- Research Activity
- Quality Assurance
- Internationalisation
- Professional Practice (Work Experience / Internship etc.)

4.1 Reflection, including internal and external engagement

Consideration for the panel:	Is there evidence of reflection in the SER of how the programme performed since the last programmatic review.
Overall Finding:	Yes

4.2 Demand

Consideration for the panel:	Is there a need for the programme and has evidence been provided to support it?
Overall Finding:	Yes

4.3 Award

Consideration for the panel:	Is the level and type of the award appropriate?
Overall Finding:	Yes

Recommendation(s):

- The panel recommend that as a matter of urgency the department engages with Senior Management to address any resourcing issues that compromise the delivery of these programmes.

- The panel recommend that the programme board reviews their proposal to run the ab initio level 8 award in this area, particularly in the context of recommendation 1 (above).

4.4 Entry Requirements

Consideration for the panel:	Are the entry requirements for the proposed programme clear and appropriate? Is there a relationship with this programme and further education?
Overall Finding:	Yes

It was noted that entry level is generally Year 1, in very few cases a student comes in to Year 2.

4.5 Access, Transfer and Progression

Consideration for the panel:	Does the proposed programme incorporate the procedures for access, transfer and progression that have been established by QQI and as contained in the Institute's Quality assurance Framework (QAF) COP No.4?
Overall Finding:	Yes

4.6 Retention

Consideration for the panel:	Does the proposed programme comply with the Institute norms for retention, both in first year and subsequent years? Are both elements of the First Year Experience {(i) Learning to Learn (now Learning and Skills Innovation) and (ii) PASS} embedded in this programme? Evidence of other retention initiatives?
Overall Finding:	Yes

After discussions with the programme board, the panel noted that attendance varies from year to year. Drop-outs usually happen in first year. In terms of software development it was noted that some student's experiences are totally different to their expectations. Information to Secondary schools needs to be updated regarding the content and demands of this module.

4.7 Standards and Outcomes

Consideration for the panel:	Does the proposed programme meet the required award standards for programmes at the proposed NFQ level (i.e. conform to QQI Award Standards)? For parent award? For exit award (if applicable)? For Minor Award (if applicable)? For Special Purpose Award (if applicable)?
Overall Finding:	Yes

The awards standards requirements for programmes on the NFQ Framework can be found at http://www.hetac.ie/publications_pol01.htm

4.8 Programme Structure

Consideration for the panel:	Is the programme structure logical and well designed and can the stated programme intended learning outcomes in terms of employment skills and career opportunities be met by this programme?
Overall Finding:	Yes

In terms of programming modules it was noted that Unix is liked by some, but others just don't seem to get it. Ruby was brought in, but decided after some time to go back to Java. There was a suggestion to add in GIT repository.
The accounting elective module is highly beneficial and software development is becoming more focused in the workplace.

Recommendation(s):

- The panel recommends that the Programme board reviews all module specifications for completeness
- The panel recommend the programme board reviews the effectiveness of student participation on programme boards and how this can be improved to ensure appropriate feedback to and from students and to address student issues in the management and resourcing of modules.

4.9 Learning and Teaching Strategies

Consideration for the panel:	Have appropriate learning and teaching strategies been provided for the proposed programme that support Student Centred Learning (SCL)? Evidence of consideration of flexible delivery methods including eLearning?
Overall Finding:	Yes

Condition(s):

- The panel formally request the programme board - map the programme learning outcomes to the QQI National Standards for Computing, at each of the appropriate levels. This information needs to be made available to each person on the panel.

Recommendation(s):

- The panel recommend the programme board develop departmental procedures to improve and ensure the timeliness and quality of feedback to students on assessments and to introduce mechanisms to measure the effectiveness of those procedures.

4.10 Assessment Strategies

Consideration for the panel:	Have appropriate programme assessment strategies been provided for the proposed programme (as outlined in the QQI/HETAC Assessment and Guidelines, 2009)?
Overall Finding:	Yes

Assessment strategies are required in line with HETAC's Assessment and Standards and should be considered by the programme EPRG. See (HETAC (2009) Assessment and Standards, Section 4.6.1, page 33). Accordingly the assessment strategy should address the following (See (HETAC (2009) Assessment and Standards, Section 2.2.5, page 13) :

- Description and Rationale for the choice of assessment tasks, criteria and procedures. This should address fairness and consistency, specifically their validity, reliability and authenticity;
- Describe any special regulations;
- Regulate, build upon and integrate the module assessment strategies;
- Provide contingent strategy for cases where learners claim exemption from modules, including recognition of prior learning;
- Ensure the programme's continuous assessment workload is appropriately balanced;
- Relate to the learning and teaching strategy;
- Demonstrate how grading criteria will be developed to relate to the Institutional grading system.

Recommendation(s):

- The panel recommend the programme board develop departmental procedures to improve and ensure the timeliness and quality of feedback to students on assessments and to introduce mechanisms to measure the effectiveness of those procedures.
-

4.11 Resource Requirements

Consideration for the panel:	Does the Institute possess the resources and facilities necessary to deliver the proposed programme?
Overall Finding:	Yes

It was noted by the panel after discussions with the programme board that there can be overcrowding in labs at some times.

Recommendation(s):

- The panel recommend that as a matter of urgency the department engages with Senior Management to address any resourcing issues that compromise the delivery of these programmes.
- The panel recommend that the programme board review the currency of the reading lists and other learning materials and to ensure that the programme board reviews and revises all modules specifications for completeness.

4.12 Research Activity

Consideration for the panel:	Evidence that Learning & Teaching is informed by research? Number of staff engaged in institutional/pedagogical research?
Overall Finding:	Yes

4.13 Quality Assurance

Consideration for the	Does the proposed programme demonstrate how the Institute's quality

panel:	assurance procedures (QAF) have been applied and that satisfactory procedures exist for the on-going monitoring and periodic review of programmes?
Overall Finding:	Yes

During discussions it was noted that NQAI no longer exists and therefore in all instances anywhere NQAI appears in the document it should be taken out. However NQAI determinations (e.g. for access transfer and progression, national credit system, RPL etc) have been adopted by QQI and reference to these policies should now be described as QQI policy.

4.14 Internationalisation

Consideration for the panel:	Does the proposed programme demonstrate how the syllabi represent an international dimension? Is there evidence of approaches to induct international students?
Overall Finding:	Yes

It was noted that links still exist with China.

4.15 Professional Practice (Work Experience /Internships etc.)

Consideration for the panel:	Does the proposed programme incorporate professional practice as per the Institute's policy on professional practice (PP)? If not, is there evidence that PP is under consideration by the programme board?
Overall Finding:	Yes

It was suggested by the panel that work placements should be in Year 3, although through discussion it was noted that it is difficult to place all students in industry in Year 3.

5.0 Module-Level Findings: General

5.1 Module Assessment Strategies

Consideration for the panel:	Have appropriate module assessment strategies been included in each Module Descriptor?
Overall Finding:	Yes

It was suggested by the panel that the module descriptor indicates where and what type of assessment strategy would be applied instead of the current description of 'none'.

After discussion around the importance of ethics, which the programme board indicated was is embedded in a number of the modules, it was suggested by the panel that explicit mention of the word 'ethics' should be somewhere in learning outcomes if not in the titles.

The EPRG would like to compliment the programme panel on their development of the new module 'Virtual and Augmented Reality' through e-learning, which replaces the 20 year old module (human computer interaction).

It was noted that the graphs & networks modules are becoming more mathematical.

The EPRG complimented the programme board in terms of the new module 'Semantic Web & Linked Data'.

5.2 Module Level-Findings: Specific Named Modules

5.2.1 Module (Database Management)

The panel endorse the title change of Database Management to
Database Management Systems 1 – Year 2

5.2.2 Module (D.B.M.S)

The panel endorse the title change of (DBMS) to
Database Management Systems 2 – Year 3

5.2.3 Module (Mobile Application Development)

The panel endorse the title change of (Mobile Application Development) to
Advanced Mobile Application - Year 4

6.0 Student Findings

2 students presented.

The first student - Y2 liked the course content of this programme; he got a place in Business in NUIG but preferred GMIT. He had heard it was practical and budget based which suited his needs. He liked the element of there being a lot of lab work and creating stuff. He found everybody helped each other.

The second student – Y3 was doing a GTI course and this programme was the obvious choice to progress into. He really liked the programme; found the systems side very good and efficient.

Both Students agree that Moodle was brilliant, if they were out for a day or missed a class they found it easy to keep up through notes on Moodle. They both agreed that there should be more feedback especially on continuous assessments in particular. They may get their results but very little feedback. They suggested that Moodle would be the ideal tool for feedback.

They didn't get the option to have a look at their transcript after receiving their results; they both thought this would be helpful to see where marks were lost.

In relation to modules - one of the students really liked 'data structure & algorithms' but thought that some of his class found it hard to grasp. He thought that you had to have an honest curiosity about the subject and that more lab time may be required for this module.

In terms of the structure of the modules and how they fit together – Both students felt its cobblestones in first year, but, not 100% clear. They were unsure about the student handbook – 1st year is difficult to get your head around, but by 2nd year things become concrete and settled.

Lab facilities were ok, if a bit slow and overcrowded at times. They both knew students who didn't attend because of overcrowding. Later in the year it was easier when a certain amount of students had dropped out.

Majority of students had their own laptops and were forced to get Windows 8.1, which didn't work well.

The students suggested that classes should be set and all notes put up on Moodle. In most cases the lecturers are there for you and want you to do well.

They were not clear on in terms of student rep responsibilities and were not aware of any student rep training, but thought this may have happened early on in Year 1 before the student rep was elected.

They were happy to recommend this programme to others and both agreed that they came in with little or no knowledge and can now write programmes and perform different types of programming.

7.0 Stakeholder Engagement

The panel would like to compliment the programme board on their level of stakeholder engagement.

8.0 Future Plans

The panel agrees that the proposed ab initio Bachelor of Science Honours degree in Computing in Software Development be validated but should only be offered subject to the Department being able to resource it. This is a matter solely for discussion and agreement between the Department and Senior Management in GMIT.

Consideration for the panel:	Evidence that the programme board considered and identified opportunities and signalled proposals for related new programme and award development.
Overall Finding:	Yes

Validation Panel Report Approved By:

Signed:

Dermot Douglas
Chairperson

Date: 23/04/2015.