



QQI

Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Template version 1.2 20.12.2016

Independent Evaluation Report on an Application for Validation of a Programme of Education and Training

Part 1

Provider name	College of Computing Technology (CCT)
Date of site visit	13 th June 2017
Date of report	23 rd June 2017

	First intake	Last intake
Enrolment interval	September 2017	September 2021
Maximum number of annual intakes	1 full-time 2 part-time	

Principal programme	Title	<i>Higher Diploma in Science in Computing</i>
	Award	Higher Diploma in Science in Computing
	Credit	75
	Duration¹ <i>(years, months, weeks)</i>	1 year full-time; 2 years part-time
	Recommendation <i>Satisfactory OR Satisfactory subject to proposed conditions² OR Not Satisfactory</i>	<ul style="list-style-type: none">• Satisfactory subject to proposed special conditions. See <i>Section 13: Overall recommendations to QQI.</i>

¹ Expressed in terms of time from initial enrolment to completion

² Normally an application that fails to meet the criteria in any of its aspects will be considered as not satisfactory. Nevertheless, so as to ensure that the validation process will not be implemented unreasonably, if an independent evaluation finds that a programme virtually meets the validation criteria but needs some minor modifications, the independent evaluation could conclude “Satisfactory subject to recommended special conditions” where the special conditions prescribe the defects that require to be corrected.

Further, in exceptional cases the ‘special conditions’ may be used to identify parts of the application that are considered satisfactory on a stand-alone basis. For example, an application might propose a programme to be provided at two locations but the independent evaluation report may find the application satisfactory on condition that it be provided only at one specified location and not at the other. These conditions will not however be used to recommend that QQI can be satisfied with a programme conditional on a different QQI award (e.g. at a lower NFQ level or having a different CAS award title) being sought than the one identified in the application.

Embedded programme	Title	Not applicable
	Award	Not applicable
	Credit	Not applicable
	Duration (years, months, weeks)	Not applicable
	Recommendation Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory	Not applicable

Evaluators

Evaluators		
Name	Role	Affiliation
David Denieffe	Chair	Registrar, Institute of Technology Carlow
Brendan Ryder	Secretary	Head of Department of Visual and Human-Centred Computing, Dundalk Institute of Technology (DkIT)
Diane O'Brien	Academic Representative	Programme Co-ordinator, Higher Diploma in Science in Computing, Institute of Technology Sligo (IT Sligo)
Bianca Schoen-Phelan	Academic Representative	Programme Chair, Higher Diploma in Science in Computing, Dublin Institute of Technology (DIT)
Paraic Hegarty	Industry Representative	Software and Services Director, Akari Software
Tom Donoghue	Student Representative	National College of Ireland (NCI)

Principal Programme

Names of Centres Where the Programmes are to be provided	Maximum number of learners	Minimum number of learners
College of Computing Technology (CCT), 30-34 Westmoreland St., Dublin 2.	50 PT 25 FT per intake	12 PT 10 FT

Target learner groups	This programme is intended for graduates aspiring to careers in the ICT sector / ICT related positions or wishing to progress from their current role in the sector or an ICT relevant position. Individuals should have previous knowledge in computer science, or similar disciplines, through professional experience and/or educational qualifications. This programme is not suitable for individuals with only basic computer literacy.
Number of learners per intake	50 PT 25 FT per intake
Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Full time and Part-Time, On Campus
The teaching and learning modalities	Lecture, lab, placement, tutorial, project supervision
Brief synopsis of the programme (e.g. who it is for, what is it for, what is involved for learners, what it leads to.)	<ul style="list-style-type: none"> The Higher Diploma in Computing is designed for Level 7 and 8 (Irish NQF) degree-holders in computing disciplines, and level 8 (Irish NQF) degree holders in cognate disciplines, to achieve the knowledge, skills and competencies required to earn a Level 8 award in computing. The programme consists of 60 credits of module work and 15 credits of project or work-placement.
Specifications for teaching staff	<p>WTE:</p> <ul style="list-style-type: none"> No: 5 Qualifications and experience: MSc or PhD in Computing, Computer Science, or equivalent. Experience delivering NFQ Level 8 computing modules. <p>WTE:</p> <ul style="list-style-type: none"> No: 1 Qualifications and experience: MSc or PhD in Computing or Education. Experience managing Level 8 computing programmes including work-experience and project modules. <ul style="list-style-type: none"> See Appendix 7: Staff CV for staff qualifications.
Specifications for the ratio of learners to teaching-staff	<ul style="list-style-type: none"> Staff to Learner Ratio: 1:25 - Laboratory work Staff to Learner Ratio: 1:50 - Lectures Staff to Learner Ratio: 1:3 - Project Staff to Learner Ratio: 1:3 - Work Placement

Programmes being replaced (applicable to applications for revalidation)		
Code	Title	Last enrolment date
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable

Embedded programme³

- Not Applicable

Module⁴

- Not Applicable

Other noteworthy features of the application

- Not applicable.

³ This only needs to be completed where embedded programmes may be offered independently of the principal programme. Add more subsections if there are more than one embedded programmes proposed to lead to QQI awards.

⁴ This only needs to be completed where modules may be offered independently. Add more subsections if there are more than one modules proposed to lead to QQI awards.

Part 1A Evaluation of the Case for an Extension of the Approved Scope of Provision (where applicable).

Not applicable.

Part 2 Evaluation against the validation criteria

1 The provider is eligible to apply for validation of the programme

Satisfactory (yes, no, partially)	Comment	Sub criteria
Yes	<ul style="list-style-type: none"> CCT (“the Provider”) is a registered provider with QQI and a due diligence examination has been completed by QQI. The Provider has QQI approval for six programmes on the National Framework of Qualifications (NFQ), two of which were re-validated in 2015. The Provider has agreed comprehensive quality assurance and enhancement policies and procedure with QQI which are continuously reviewed and revised as required. 	a) The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme.
Yes	<ul style="list-style-type: none"> A declaration has been signed by the College President (Mr Neil Gallagher) and is included on pg. 2 of the programme documentation. 	b) The application for validation is signed by the provider’s chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed.
Yes	<ul style="list-style-type: none"> See 1(b) above. 	c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements. ⁵

⁵This criterion is to ensure the programme can actually be provided and will not be halted on account of breach of the law. The declaration is sought to ensure this is not overlooked but QQI is not responsible for verifying this declaration of enforcing such requirements.

2 The programme objectives and outcomes are clear and consistent with the QQI awards sought

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> The Programme aims and objectives are clearly stated in <i>Section 2.1</i> of the documentation (pg. 24 – 26; including transferable skills and graduate vision). Aim of the Programme is to provide reskilling and upskilling opportunities in the field of Computing for graduates of cognate disciplines OR Computing graduates who need upskilling. Learning outcomes are clearly articulated for the Programme and its associated modules. 	a) The programme aims and objectives are expressed plainly.
Yes	<ul style="list-style-type: none"> The programme documentation indicates that graduates will attain the NFQ Level 8 award of <i>Higher Diploma in Science in Computing</i>. The QQI award type will be included on all publicly available programme/course documentation. 	b) A QQI award is specified for those who complete the programme.
N/A	<ul style="list-style-type: none"> Not applicable 	(i) Where applicable, a QQI award is specified for each embedded programme.
Yes	<ul style="list-style-type: none"> <i>Section 2.2 Rationale for the Choice of QQI Named Award Stem Sought and for the Named Award Title</i> (pg. 26) provides the programme teams rationale for the choice of QQI award. 	c) There is a satisfactory rationale for the choice of QQI award(s).
Yes	<ul style="list-style-type: none"> The award title chosen is consistent with QQI's relevant policy. Title length is within the QQI recommended character length (overall length of a named award is limited to 43 characters). 	d) The award title(s) is consistent with unit 3.1 of QQI's <i>Policy and Criteria for Making Awards</i> .
Yes	<ul style="list-style-type: none"> The award title fully complies with all statutory, regulatory and professional body requirements. Again, the award title is informed by QQI policy. 	e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
		f) The programme title and any embedded programme titles are
Yes	<ul style="list-style-type: none"> The Programme is fully consistent with the award being sought. The programme aims and objectives and the related 	(i) Consistent with the title of the QQI award sought.

	curriculum specified align to the award being sought.	
Yes	<ul style="list-style-type: none"> The programme title is clear, accurate and succinct. 	(ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
		g) For each programme (and embedded programme)
Yes	<ul style="list-style-type: none"> There are eight programme learning outcomes articulated in <i>Section 2.4: Minimum Intended Programme Learning Outcomes (MIPLOs)</i> (pg. 27-29). Combined the programme learning outcomes will enable learners to acquire the knowledge, skills and competencies to achieve the programme stated aims and objectives (stated on pg. 24). 	(i) The minimum intended programme learning outcomes and any other educational or training objectives of the programme are explicitly specified. ⁶
Yes	<ul style="list-style-type: none"> The Programme Learning Outcomes are mapped to the Science and Computing QQI award standards (http://www.qqi.ie/Articles/Pages/Active-NFQ-Standards-for-HE.aspx). Evidence of this mapping can be found in <i>Section 2.6: Mapping the MIPLO's against the QQI Award Standards and Demonstrating Consistency</i> (pg. 30 – 35). 	(ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are consistent with the relevant QQI awards standards.
Yes	<ul style="list-style-type: none"> Minimum intended module learning outcomes are explicitly stated for all Programme modules and are contained in each module descriptor (<i>Section 6: Module Documentation</i> (pg. 80 – 165). 	h) Where applicable, the minimum intended module learning outcomes are explicitly specified for each of the programme's modules.
N/A	<ul style="list-style-type: none"> Not applicable. 	i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.
N/A	Not applicable.	(i) For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards. ⁷

⁶ Other programme objectives, for example, may be to meet the educational or training requirements of a statutory, regulatory or professional body.

⁷ Not all modules will warrant minor awards. Minor awards feature strongly in the QQI common awards system however further education and training awards may be made outside this system.

3 The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)

The Higher Diploma in Science in Computing is designed to provide opportunities to both full-time and part-time learners who wish to upskill or reskill in the area of Computing and gain employment in this area.

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • The programme development team at CCT consulted widely during programme development and these inputs were used to inform the programme learning outcomes: <ul style="list-style-type: none"> ○ Employers – <i>Section 3.9: Evidence of support for the introduction of the programme</i> (including Appendix 3: Consultation with Industry – Programme Development (recommended as part of the Independent Evaluation that was conducted prior to the programme validation site visit) (pg. 41) ○ Graduates – <i>Section 3.11: Evidence of employment opportunities for graduates</i> (pg. 46) ○ Learners – <i>Section 3.10: Evidence of learner demand for the programme</i> (pg. 42) ○ Other stakeholders - • The submission references sectoral reports, skills shortage reports appropriately. 	<p>a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.⁸</p>
Yes	<ul style="list-style-type: none"> • The Programme Learning Outcomes are fully mapped to the Science and Computing QQI award standards (http://www.qqi.ie/Articles/Pages/Active-NFQ-Standards-for-HE.aspx) (as mentioned under criterion 2 above). 	<p>b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.</p>

⁸ Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.

	<ul style="list-style-type: none"> Also, module learning outcomes are also mapped to programme learning outcomes appropriately 	
Yes	<ul style="list-style-type: none"> There is clear rationale for the programme (Section 3.1 (pg. 37). The evidence provided by CCT clearly demonstrates that there is a demand from industry for this type of conversion programme. 	(i) There is a satisfactory rationale for providing the programme.
Yes	<ul style="list-style-type: none"> The programme development team compared ten programmes from across the higher education environment (Institutes of Technology, Universities and Private Colleges) and they positioned the proposed programme in the context of identified industry needs. Evidence of comparisons conducted can be found in <i>Section 7: Comparing the MIPOs with those of comparable programmes</i> (pg. 36) (also <i>Appendix 2A - Comparing the MIPLOs with those of comparable programmes</i>) 	(ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
Yes	<ul style="list-style-type: none"> CCT have gathered feedback from employers that justifies the introduction of the programme. The programme also meets the skills requirements identified nationally through the Springboard initiative (upskilling Level 7 graduates). 	(iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
Yes	<ul style="list-style-type: none"> <i>Section 3.10: Evidence of learner demand for the programme</i> (pg. 42) identifies the demand for upskilling and conversion programmes. A particular reference is made to the ICT Skills Action Plan 2014 – 2018. 	(iv) There is evidence ⁹ of learner demand for the programme.
Yes	<ul style="list-style-type: none"> The programme development team have provided employer feedback and referenced skills shortage reports that highlight and identify job opportunities for graduates of a Level 8 programme. 	(v) There is evidence of employment opportunities for graduates where relevant ¹⁰ .
	<ul style="list-style-type: none"> See section 3(b) (i), (iii) (iv) and (v) above. 	(vi) The programme meets genuine education and training needs. ¹¹

⁹ This might be predictive or indirect.

¹⁰ It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.

¹¹ There is clear evidence that the programme meets the **target learners'** education and training needs and that there is a clear demand for the programme.

	<ul style="list-style-type: none"> • CCT have quality assurance and enhancement mechanisms in place for the management of the programme. • Mechanisms for monitoring and review are documented in <i>Section 3.14: Mechanisms to keep the programme updated and how it will be updated in consultation with stakeholders</i> (pg. 47-48): <ul style="list-style-type: none"> ○ Programme Committee Meetings; ○ Student Representative Meetings (student feedback); ○ External examiner Reports and feedback; ○ Annual Programme Review and Programmatic Review; ○ Placement Provider Forum. • <i>Section 7.1: Programme Director and Board</i> (pg. 166) provides the terms of reference for CCT's programme boards. 	c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.
Yes	<ul style="list-style-type: none"> • This programme is not a vocational or professional programme. • However, as mentioned previously there has been significant consultation with employers and CCT's external Advisory Board to ensure that specified skills shortages are being addressed. 	d) Employers and practitioners in the cases of vocational and professional awards have been systematically involved in the programme design where the programme is vocationally or professionally oriented.
Yes	<ul style="list-style-type: none"> • See Section 3 (b) above. 	e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

4 The programme's access, transfer and progression arrangements are satisfactory

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes (with condition)	<ul style="list-style-type: none"> • The programme meets each of the criteria for access, transfer and progression articulated in QQI policy. • Clear entry requirements have been provided for the full-time and part-time programme (pg. 55 - 59). CCT decisions regarding entry were informed by entry requirements from other higher education institutions (pg. 53). • Clear RPL procedures have been provided for applicants who do not meet the identified minimum entry requirements (pg. 55 - 59). • Transfer procedures and criteria have been provided in <i>Section 4.3: Programme-specific transfer (outward) procedures and criteria</i>. It is not anticipated that transfer will be an issue with this programme as it is a one year conversion programme. • Progression opportunities are provided on pg. 61. • Appendix 4: Appendix 4 - PEL Alternate Provision Arrangements outlines procedures for the Protection of the Enrolled Learner (arrangements with NCI and Griffith College are described). • See condition(s) at the end of the report. 	<p>a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied¹².</p>
Yes	<ul style="list-style-type: none"> • Information to be provided to learners on the programme is clear and appropriate (Section 4.1 (pg. 51)). 	<p>b) Programme information for learners is provided in plain language. This details what the programme expects of learners and what learners can</p>

¹² Each of the detailed criteria set out in the Policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training must be addressed in the provider's evaluation report. The detailed criteria are (QQI, restated 2015) arranged under the headings

- Progression and transfer routes
- Entry arrangements
- Information provision

	<ul style="list-style-type: none"> • The following information was included in CCT’s submission and will be made available to students: <ul style="list-style-type: none"> ○ Marketing Material (CCT website, printed programme brochure); Sample marketing material was provided in <i>Appendix 14</i> (provided on accompanying CD). ○ Student Programme Handbook (<i>Appendix 11a: Programme Handbook; Appendix 11b: Student Handbook</i> (generic student handbook)) ○ Placement Handbook (<i>Appendix 12: Work Placement Handbook</i>) • CCT Quality Assurance Manual also contains a Public Information Policy (<i>Policy – CCTP1101 – Public Information</i>, https://www.cct.ie/about/qa/) 	<p>expect of the programme and that there are procedures to ensure its availability in a range of accessible formats.</p>
Yes	<ul style="list-style-type: none"> • The programme is designed for native English speakers and is targeted at Irish students. • <i>Section 4.2: Entry procedures and criteria for the programme including procedures for recognition of prior learning</i> indicates that prospective students must present evidence of English language proficiency which is equal or greater than B2+ in the Common European Framework of Reference for Languages (CEFR). • English language proficiency demonstrated through other systems (e.g. IELTS, TOEFL, Cambridge) will be examined to ensure that they meet the minimum standard. 	<p>c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFR¹³) in order to enable learners to reach the required standard for the QQI award.</p>
Yes	<ul style="list-style-type: none"> • See 4(a) above. • Applicants seeking entry onto the programme via RPL (<i>Section 4.2.9: Access Processes including Recognition of prior and Experiential Learning</i>) will be 	<p>d) The programme specifies the learning (knowledge, skill and competence) that target learners are expected to have achieved before they are enrolled in the programme and any other assumptions about enrolled learners (programme participants).</p>

¹³ http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf (accessed 26/09/2015)

	<p>assessed on a case by case basis in accordance with CCT's policies and procedures.</p> <ul style="list-style-type: none"> • Proof must be provided by applicants that they have sufficient knowledge, skills and competencies to successfully complete the programme. 	
Yes	<ul style="list-style-type: none"> • CCT have suitable procedures and criteria contained in the CCT Quality Assurance Manual (available at: https://www.cct.ie/about/qa/; Policy – CCTP602 – RPL, <i>Section 6 – Procedures for Student Admission, Access, Transfer, Progression, Recognition and Certification</i>). • Procedures for Advanced Entry can be found in the CCT Quality Assurance Manual; <i>Policy – CCTP601 – Access Transfer and Progression</i>; referenced in the programme submission - Section 4.2.9 (pg. 59). 	e) The programme includes suitable procedures and criteria for the recognition of prior learning for the purposes of access and, where appropriate, for advanced entry to the programme and for exemptions.
		f) The programme title (the title used to refer to the programme):-
Yes	<ul style="list-style-type: none"> • The title of the award has intentionally been specified as "Computing" and the core intended programme learning outcomes reflect this. • The level and type of the award is consistent with National Standards and with QQI policies on award title and class (<i>Section 2.3: QQI Award standards used</i>). 	(i) Reflects the core <i>intended programme learning outcomes</i> , and is consistent with the standards and purposes of the QQI awards to which it leads, the award title(s) and their class(es).
Yes	<ul style="list-style-type: none"> • The title of the award is clear and unambiguous and as a result will be meaningful to learners. This conversion programme is meeting specific industry needs (upskilling and reskilling) and has been carefully designed by CCT to ensure that learners are adequately supported in their learning. • The programme title is justified in <i>Section 4.1.1: Justification of the programme title</i> of the programme submission; 	(ii) Is learner focused and meaningful to the learners;
Yes	<ul style="list-style-type: none"> • The generic "Computing" field has long lasting significance. 	(iii) Has long-lasting significance.

	<ul style="list-style-type: none"> The title provides a clear indication of the discipline area which informs both the student and potential employers of the focus of the award. 	
Yes	<ul style="list-style-type: none"> The programme title complies with all relevant statutory, regulatory and professional body requirements. 	g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.

5 The programme's written curriculum is well structured and fit-for-purpose

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> The programme is suitably structured and is coherently designed to enable learners to achieve its intended learning outcomes (Section 2.4, pg. 27-36). It will provide learners with the relevant knowledge, skills and competencies that will enable them to seek employment in the Computing industry sector. Opportunities for integrated learning are described in <i>Section 5.5: Integrated learning opportunities and assessment in light of the MIPLOs</i> (pgs. 68 – 69). The capstone project (either Work Placement or Guided Technology Project) has been designed to integrate learning outcomes from the other programme modules. The Approved Programme Schedule (APS) is provided in <i>Section 10: Proposed Programme Schedule</i> (pgs. 183-186). 	a) The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.
Yes	<ul style="list-style-type: none"> This programme is designed to meet specific industry requirements and as a result learner choice is limited. 	b) In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.
Yes	<ul style="list-style-type: none"> This is a single stage (one calendar year) that is focused on achieving the stated programme learning outcomes. 	c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended <i>programme</i> learning outcomes.

Yes	<ul style="list-style-type: none"> The programme aims, objectives and learning outcomes and its associated modules are explicitly stated and clearly related thus making the programme clear to learners and staff. 	d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.
Yes	<ul style="list-style-type: none"> The programme is structured and scheduled realistically. The programme development team have given significant consideration to the overall programme structure and delivery to ensure the achievement of the programme learning outcomes. Programme indicative timetables are provided in <i>Appendix 5A - Proposed Full-Time Programme Timetable and Appendix 5B - Proposed Part-Time Programme Timetable</i>). 	e) The programme is structured and scheduled realistically based on sound educational and training principles ¹⁴ .
Yes	<ul style="list-style-type: none"> The curriculum is comprehensively and systematically documented with programme structure, management and delivery having been satisfactorily considered. The curriculum overview is provided in Section 5: <i>Written Curriculum</i> (pgs. 63-67) and detailed module descriptors are provided in <i>Section 6: Module Documentation</i> (pgs. 80-165). Module learning outcomes, teaching and learning strategies and assessment strategies are constructively aligned in accordance with learning and teaching best practice. Module learning outcomes are mapped to the defined programme 	f) The curriculum is comprehensively and systematically documented.
Yes	<ul style="list-style-type: none"> The credit allocation for the programme is consistent with other similar awards (Higher Diploma at NFQ Level 8). The programme development team have provided a justification for the credit weightings in <i>Section 4.6:</i> 	g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.

¹⁴ This applies recursively to each and every element of the programme from enrolment through to completion.

In the case of a modular programme, the pool of modules and learning pathway constraints (such as any prerequisite and co-requisite modules) is explicit and appropriate to the intended programme learning outcomes.

	<i>Detail the credit system used for the programme (pg. 61).</i>	
Yes	<ul style="list-style-type: none"> • The programme is comprised of eight modules with 5 ECTS credits; two modules with 10 ECTS credits and a capstone module worth 15 ECTS credits. • The module learning outcomes reflect the higher standard that is expected when compared to the level of knowledge, skill and competence learners will have when entering the programme. • The alignment of module learning outcomes to programme learning outcomes, mapped to QQI award standards, highlight this difference. • The teaching and learning and assessment strategies for each module clearly indicate what the learner must achieve to progress. • Each module descriptor contains a section on timetabling, learner effort and credit which justifies credit allocation. 	h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.
Yes	<ul style="list-style-type: none"> • Work placement is a key component for learners undertaking the full-time version of the programme. • The programme development team have applied the same rigorous design principles to this module as they did to other modules on the programme. Learning outcomes, teaching and learning strategies, content and assessment strategies are appropriately constructively aligned. • CCT's work placement policy was provided in <i>Appendix 9 - Work Placement Allocation, Support and Quality Assurance</i>. A programme specific work placement handbook was provided in <i>Appendix 12 - Work Placement Handbook</i>. 	i) Elements such as practice placement and work based phases are provided with the same rigour and attentiveness as other elements.
Yes	<ul style="list-style-type: none"> • The programme duration (1 year full-time; 2 years part-time) is consistent with the difference between the minimum entry and award standard and with the credit allocation. • The fulltime equivalent contact time is consistent with the difference 	j) The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award

	<p>between the minimum entry and award standard and with the credit allocation. The total learner workload for the programme is 2075 hours (APS on pg. 184-184) with a ratio of at least 1 hour contact for every 3 hours of independent learning. This is consistent with norms for NFAQ Level 8 Higher Diploma awards.</p> <ul style="list-style-type: none"> • Programme indicative timetables are provided in <i>Appendix 5A - Proposed Full-Time Programme Timetable</i> and <i>Appendix 5B - Proposed Part-Time Programme Timetable</i>). 	standard and with the credit allocation. ¹⁵
--	--	--

6 There are sufficient qualified and capable programme staff available to implement the programme as planned

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • The staff members identified to teach, manage and administer the programme are currently employed by CCT. All are qualified to the appropriate standard. Where additional staff are required an external recruitment process will be initiated (not anticipated). • The specification of staff required to teach on the programme is provided in <i>Section 7: Programme Staff</i>. • Specifications of the qualifications (academic, pedagogical, professional/occupational and experience) required to teach modules are provided in each module descriptor. • CCT staff will undertake project and placement supervision (in conjunction with appropriate employer interactions). A programme specific work placement handbook was provided in <i>Appendix 12 - Work Placement Handbook</i>. 	a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to practise where applicable, experience and the staff/learner ratio requirements. See also unit (17.12c).
Yes	<ul style="list-style-type: none"> • CCT have clearly identified a complement of staff who are suitably qualified that will deliver the programme (<i>Section 7.2: Complement of staff (or potential staff</i> (pg. 167)). There is also a pool of part-time staff 	b) The programme has an identified complement of staff ¹⁶ (or potential staff) who are available, qualified and capable to

¹⁵ If the duration is variable, for example, when advanced entry is available, this should be explained and justified.

¹⁶ Staff here means natural persons required as part of the programme and accountable (directly or indirectly) to the programme's provider, it may for example, include contracted trainers and workplace supervisors.

	<p>qualified in the Computing discipline that could be utilised if required.</p> <ul style="list-style-type: none"> • Staff CVs are provided in <i>Appendix 7: Staff CV</i>) 	<p>provide the specified programme in the context of their existing commitments.</p>
Yes	<ul style="list-style-type: none"> • The staff who will be delivering and managing the programme have been employed by CCT for a significant amount of time and have demonstrated a capacity to deliver programmes at a similar (and other) NFQ level. • The staffs combined teaching and learning and assessment skills will be available to the programme. • This is the first programme where work placement supervision is the sole responsibility of CCT (previously managed with FIT through a Memorandum of Understanding (MOU)). Appropriate supports (including a work placement supervisors workshop) have been put in place to ensure that CCT staff can undertake the required work placement roles (pg. 168). 	<p>c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.</p>
Yes	<ul style="list-style-type: none"> • CCT have a Performance Management and Development system in place (Policy – CCTP804 – Performance Management Appraisal; (Policy – CCTP805 – Research Training Development Certification (https://www.cct.ie/about/qa/)) to ensure that staff have the competency to teach and assess on programmes. • Performance management and development of faculty is also facilitated through the following structures: <ul style="list-style-type: none"> ○ Induction training (CCT is committed to the implementation of the HECA induction programme (<i>Appendix 10 - HECA Staff Induction Handbook</i>)); ○ Classroom Observations where peer feedback is ○ provided and further development needs identified. ○ Annual training plans; 	<p>d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development¹⁷ opportunities¹⁸.</p>

¹⁷ Development here is for the purpose of ensuring staff remain up-to-date on the discipline itself, on teaching methods or on other relevant skills or knowledge, to the extent that this is necessary to ensure an adequate standard of teaching.

¹⁸ Professional or vocational education and training requires that teaching staff's professional/vocational knowledge is up to date. Being qualified in a discipline does not necessarily mean that a person is currently competent in that discipline. Therefore, performance management and development of professional and vocational staff needs to focus on professional/vocational competence as well as pedagogical competence. Professional development may include placement in industry, for example. In regulated professions it would be expected that there are a suitable number of registered practitioners involved.

	<ul style="list-style-type: none"> ○ Discipline and Pedagogical supports. ● Analysis of examination results and outputs of student feedback mechanisms (programme and module level, Irish Survey of Student Engagement (if applicable)) provide evidence that staff are competent to enable learners achieve stated learning outcomes. 	
Yes	<ul style="list-style-type: none"> ● See Section 6(d) 	<p>e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.</p>
	<ul style="list-style-type: none"> ● Not applicable. All staff proposed to deliver and manage the programme are currently employed by CCT. 	<p>f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.</p>

7 There are sufficient physical resources to implement the programme as planned

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • CCT have the physical resources to successfully deliver the programme and provide a satisfactory student experience. • This includes the following: <ul style="list-style-type: none"> ○ Traditional classrooms and collaborative learning spaces with Internet access; ○ IT Laboratories with access to relevant technology, software and Internet access; ○ Small study areas for independent study and group work; ○ Access to library facilities (physical and online); ○ Recreation and dining space. ○ Moodle Virtual Learning Environment (VLE); ○ Projection, printing and photocopying facilities. • CCT is also committed to providing additional facilities and resources if required in the future. • Physical resources are documented in <i>Section 8: Physical Resources</i> (pgs. 170 – 173) and also in <i>Appendix 8 - Information Technology Resources</i>. 	<p>a) The specification of the programme’s physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also (17.12d).</p>
Yes	<ul style="list-style-type: none"> • See 7(a) above. 	<p>b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:</p>
Yes	<ul style="list-style-type: none"> • See 7(a) above. • Learners completing a work placement will have access to the necessary facilities that will enable them to meet the required learning outcomes of the work placement. • Work placement will be secured by utilising existing industry contacts and 	<p>(i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme’s learning environments including the workplace learning environment)</p>

	relationships and will be supported by Fastrack to IT (FIT).	
Yes	<ul style="list-style-type: none"> See 7(a) above. 	(ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)
Yes	<ul style="list-style-type: none"> See 7(a) above. 	(iii) printed and electronic material (including software) for teaching, learning and assessment
Yes	<ul style="list-style-type: none"> See 7(a) above. 	(iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
Yes	<ul style="list-style-type: none"> Technical support services are continuously provided by the IT Network Support Manager and the IT Network Administration staff, lead by the Dean for Administration and Finance. 	(v) technical support
Yes	<ul style="list-style-type: none"> Administration support is provided by the administration staff lead by the Dean of Administration and Finance. 	(vi) administrative support
Yes	<ul style="list-style-type: none"> CCT has a dedicated Careers Support (including Placement) Service which is co-ordinated and managed by a Careers Advisor. Work placements are organised by the Careers Advisor and Fastrack to IT (FIT). <i>Section 8.3: Company placement resources</i> (pg. 176) outlines the main functions of the Careers Support Service. 	(vii) company placements/internships – if applicable
-	<ul style="list-style-type: none"> Not applicable. 	c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).
		d) There is a five-year plan for the programme. It should address
Yes	<ul style="list-style-type: none"> A five year plan for minimum and maximum number of learners for both full-time and part-time provision is provided in the submission documentation, Section 1.2 (pg. 19) 	(i) Planned intake (first five years) and
Yes	<ul style="list-style-type: none"> A five year plan detailing income and expenditure is provided in <i>Section 8.5</i>: 	(ii) The total costs and income over the five years based on the planned intake.

	<i>Five-year plan for the programme (pg. 177).</i>	
Yes	<ul style="list-style-type: none"> • CCT has controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment). • <i>Section 8.6: Entitlements to use the property required (pg. 179)</i> 	e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

8 The learning environment is consistent with the needs of the programme's learners

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • The programme's physical, social, cultural and intellectual environment is consistent with enabling learners achieve the programme intended learning outcomes. 	a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.
Yes	<ul style="list-style-type: none"> • CCT's teaching and learning environment is well established and the programme affords learners opportunities to interact with peers, lecturer(s)/teacher(s), supervisors and industry practitioners as appropriate. • Learners can access the following support services (Section 8.2.5 (pg. 173-176): <ul style="list-style-type: none"> ○ Academic (face-to-face and online using the Moodle VLE; ○ Pastoral; ○ Guidance and Careers Support (including Placement); ○ Special Needs and Disabled; ○ Placement; ○ General. 	b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.
Yes	<ul style="list-style-type: none"> • Robust quality assurance procedures for work placement can be found in Section 5.7: Integration, organisation and oversight of work-based learning (pgs. 71-72) and are also evidenced in: 	c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having

	<ul style="list-style-type: none"> ○ CCT’s work placement policy provided in <i>Appendix 9 - Work Placement Allocation, Support and Quality Assurance</i>. ○ Programme specific work placement handbook provided in <i>Appendix 12 - Work Placement Handbook</i>. 	regard to the different nature of the workplace.
--	---	--

9 There are sound teaching and learning strategies

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • The programme teaching and learning strategy is provided in <i>Section 5.6: Programme teaching and learning (including formative assessment) strategy</i> (pgs. 69-71). There is a strong emphasis on active learning and it clear that the varied strategies adopted are in line with learning and teaching best practice and include: <ul style="list-style-type: none"> ○ Formative assessment; ○ Summative assessment; ○ Problem-based Learning (PBL); ○ Group work (guided by CCT’s Policy – CCTP502 – Group Project); ○ Peer observation; ○ Flipped learning (as appropriate); ○ Use of Moodle VLE (central point of contact for all student learning interactions). • Module teaching and learning strategies are provided in each module descriptor (<i>Section 6: Module Documentation</i> (pgs. 80-165). • There are clear linkages between the programme teaching and learning strategies and the module teaching and learning strategies. 	a) The teaching strategies support achievement of the intended programme/module learning outcomes.
Yes	<ul style="list-style-type: none"> • The programme modules are designed purposefully to provide 	b) The programme provides authentic learning opportunities to enable learners to achieve the

	<p>authentic and realistic learning opportunities for learners.</p> <ul style="list-style-type: none"> The <i>Work Placement</i> module is a capstone project (facilitating integration of learning from constituent modules) which is used to embed work-based learning in the programme. 	intended programme learning outcomes.
Yes	<ul style="list-style-type: none"> The overall learner effort for this programme is consistent with norms for NFQ Level 8 Higher Diploma awards (See 5(j) above also) and the programme development team have endeavoured to balance the student workload with cognisance been given to the type of learner who will participate in the programme. There is a significant focus on formative assessment and providing timely feedback to learners which assist learners with the attainment of module learning outcomes and consequently programme learning outcomes. Repeat assessment opportunities are also provided (See Section 10). Programme indicative timetables are provided in <i>Appendix 5A - Proposed Full-Time Programme Timetable</i> and <i>Appendix 5B - Proposed Part-Time Programme Timetable</i>). 	c) The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload).
Yes	<ul style="list-style-type: none"> Learning is monitored, supervised and assessed in accordance with CCT's learning and teaching and assessment policies and procedures (CCT Quality Assurance Manual, <i>Section 5: Student-Centred Learning, Teaching and Assessment</i>) 	d) Learning is monitored / supervised.
Yes	<ul style="list-style-type: none"> See 9(c) and 8(b) above. 	e) Individualised guidance, support ¹⁹ and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.

¹⁹ Support and feedback concerns anything material to learning in the context of the programme. For the avoidance of doubt it includes among other things any course-related language, literacy and numeracy support.

10 There are sound assessment strategies

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • QQI's protocols, standards and guidelines relating to assessment have been embedded in CCT's Quality Assurance system (policy and procedure) as appropriate. • Fairness, consistency and authenticity of assessments is endorsed by Programme Boards, Examination Boards and External Examiners. 	a) All assessment is undertaken consistently with <i>Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards</i> ²⁰
Yes	<ul style="list-style-type: none"> • CCT's assessment procedures are governed by its agreed QA policy and procedure which is available in the CCT Quality Manual which is published on the CCT website (https://www.cct.ie/about/qa/) 	b) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.
Yes	<ul style="list-style-type: none"> • CCT's standard assessment policy and procedure for assessment will apply to this programme. • The external examiner(s) appointed will have the responsibility of ensuring fairness and consistency and making sure that the module assessments are rigorous, valid and authentic and aligned to the defined module learning outcomes. 	c) The programme includes specific procedures that are fair and consistent for the assessment of enrolled learners to ensure the minimum intended programme/module learning outcomes are acquired by all who successfully complete the programme. ²¹
Yes	<ul style="list-style-type: none"> • Formative assessment (Section 5.6, pg. 69) is firmly embedded into the programme and is used to enhance the attainment of module learning outcomes (See 9(c) above). • An overview of summative assessment is provided in <i>Section 5.10: Programme summative assessment strategy</i> (pg. 76-78). • Both summative and formative assessments are detailed in each module descriptor (<i>Section 6: Module Documentation</i>, pgs. 80-165). 	d) The programme includes formative assessment to support learning.
Yes	<ul style="list-style-type: none"> • See 10 (c) above. • The programme development team have provided a programme 	e) There is a satisfactory written programme assessment strategy for the programme as a whole

²⁰ See the section on transitional arrangements.

²¹ This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.

	<p>assessment strategy in <i>Section 5: Written Curriculum</i> and repeat assessment procedures can be found in section 5.10.1 (pg. 78) and are governed by CCT's Policy – CCTP504 – Repeat Assessment (https://www.cct.ie/about/qa/).</p> <ul style="list-style-type: none"> • Module assessment strategies are provided in each module descriptor (<i>Section 6: Module Documentation</i>, pgs. 80-165) and are aligned to the programme assessment strategy. It is clear which module learning outcome(s) are being measured by each assessment element/component. Each module also includes a section detailing what a learner must do in order to meet the minimum intended module learning outcomes and pass a module. • An indicative assessment schedule should be provided to ensure that the learner is not over assessed (see recommendations at the end of the report). 	<p>and there are satisfactory module assessment strategies for any of its constituent modules.²²</p>
Yes	<ul style="list-style-type: none"> • Sample assessment instruments, tasks and marking schemes are provided in <i>Appendix 6 - Samples of Award Stage Assessment</i>. 	<p>f) Sample assessment instruments, tasks, marking schemes and related evidence have been provided for each award-stage assessment and indicate that the assessment is likely to be valid and reliable.</p>
Yes	<ul style="list-style-type: none"> • Moderation of summative assessments in accordance with: <ul style="list-style-type: none"> ○ CCT's Marks and Standards (https://www.cct.ie/about/qa/) ○ CCT's QA policy and procedures ○ QQI's criteria and protocols for assessment found in <i>Assessment and Standards 2013</i> 	<p>g) There are sound procedures for the moderation of summative assessment results.</p>
Yes	<ul style="list-style-type: none"> • Each assessment has been designed by the programme development team to demonstrate the achievement of learning outcomes. • Assessment strategies have been mapped against both module learning 	<p>h) The provider only puts forward an enrolled learner for certification for a particular award for which a programme has been validated if they have</p>

²² The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.

	<p>outcomes and programme learning outcomes.</p> <ul style="list-style-type: none"> Module descriptors can be found in <i>Section 6: Module Documentation</i> (pgs. 80-165). 	<p>been specifically assessed against the standard for that award.²³</p>
--	---	---

11 Learners enrolled on the programme are well informed, guided and cared for

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> A Student Handbook (generic to all CCT programmes) and Programme Handbook (specific to the Higher Diploma in Science in Computing) (<i>Appendix 11B - Student Handbook and Appendix 11A - Programme Handbook</i> respectively) are provided to learners on the programme. 	<p>a) There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.</p>
Yes	<ul style="list-style-type: none"> See 11 (a) and Section 8. 	<p>b) Information is provided about learner supports that are available to learners enrolled on the programme.</p>
Yes	<ul style="list-style-type: none"> A Complaints and Appeals policy is contained in CCT Quality Assurance Manual (Policy – CCTP903 – Complaints and Appeals - https://www.cct.ie/about/qa/). Learners are informed about policies and procedures during induction and the information is provided in the Student Handbook and/or Programme Handbook (see 11 (a) above). 	<p>c) Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.</p>
Yes	<ul style="list-style-type: none"> There is only one learning pathway for this programme. Learners must take all modules specified for the mode (full-time, part-time) selected. Learners take the Work Placement module in full-time mode and Guided Technology Project in part-time mode. 	<p>d) If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.</p>

²³ If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

	<ul style="list-style-type: none"> This is consistent with a conversion programme (for upskilling or reskilling). 	
Yes	<ul style="list-style-type: none"> CCT have significant experience delivering to diverse cohorts of learners (school leaver, mature entrants, transfer learners, international learner, RPL applicants). CCT provide relevant supports to cater for diverse learners (see Section 8 above). 	e) The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.
Yes	<ul style="list-style-type: none"> All learners are treated as individuals and additional personalised supports are provided as required (within the limits of available resources). See Section 8 above. 	f) There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.
Yes	<ul style="list-style-type: none"> Reasonable accommodation is provided for learners with identified needs. See Section 8 above. 	g) The programme provides supports for enrolled learners who have special education and training needs.
Yes	<ul style="list-style-type: none"> See 11(g). 	h) The programme makes reasonable accommodations for learners with disabilities ²⁴ .
Yes	<ul style="list-style-type: none"> CCT complies with the code of practice for international students. Supports are available to ensure that international learners have the capacity to succeed on its programmes. 	i) If the programme aims to enrol international students it complies with the <i>Code of Practice for Provision of Programmes to International Students</i> ²⁵ and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.
Yes	<ul style="list-style-type: none"> The College President has provided a signed declaration in the submission documentation indicating that the programme complies with applicable statutory, regulatory and professional body standards (not relevant for this submission). 	j) The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).

²⁴ For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).

²⁵ See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

12 The programme is well managed

Satisfactory (yes, no, partially)	Comment	Sub-criteria
Yes	<ul style="list-style-type: none"> • CCT has a comprehensively documented Quality Assurance and Enhancement system available in hardcopy and also online at https://www.cct.ie/about/qa/. • There is also a coherent organisational structure that governs the provision of their programmes/courses. 	a) The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.
Yes	<ul style="list-style-type: none"> • The programme will be delivered in accordance with existing CCT policy and procedures for all QQI validated programmes in CCT. • The programme was developed in accordance with CCT's Policy – CCTP401 – Approval Design Monitoring Review of Programmes (https://www.cct.ie/about/qa/). • There are no changes required to the current QA system to facilitate the delivery of this programme. The programme will be delivered in the currently approved location of 30-34 Westmoreland Street, Dublin 2. 	b) The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.
Yes	<ul style="list-style-type: none"> • The module descriptors clearly identify criteria for the selection of staff to teach on modules. • <i>Section 7: Programme staff</i> details staff performance arrangements and recruitment procedures for the programme. 	c) There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.
Yes	<ul style="list-style-type: none"> • CCT has in place criteria for determining the adequacy of existing facilities and resources. • They also have criteria for identifying and procuring additional facilities and resources (if required). 	d) There are explicit and suitable programme-specific criteria for selecting physical resources that meet the programmes physical resource requirements,


	<ul style="list-style-type: none"> • CCT are committed to providing all necessary resources to ensure the successful delivery of the programme and thus enable the learners to achieve the intended programme learning outcomes. • CCT are committed to ensuring that the learners have an excellent student experience. 	and can be added to the programme's complement of supported physical resources.
Yes	<ul style="list-style-type: none"> • CCT have a comprehensive and robust Quality Assurance and Enhancement system in place which is directly informed by national, European and international standards. • The QA framework is directly informed by the ENQA's <i>Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), 2015</i> (http://www.enqa.eu/index.php/home/esg/). 	e) Quality assurance ²⁶ is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria.
Yes	<ul style="list-style-type: none"> • CCT quality manual affirms the College's approach to QA (with continuous improvement playing a pivotal role in the operation of the QA system): <i>"The College of Computing Technology (CCT) has committed itself to embracing an inclusive Quality Assurance culture. As a higher education and training institution, providing full-time and part-time ICT and Business programmes, CCT has developed a number of policies and put in place procedures to ensure these policies are effective and continuously improved"</i>. • CCT's is continuously and consistently reviewed against KPI's to ensure effectiveness and relevance. Where gaps in policy and procedure are identified they are rectified immediately. QQI are also informed of any changes to the QA system. • Programme and Examination Boards (<i>Section 7: Programme staff</i>, pg. 166 and <i>Section 9: Programme Management</i>, pg. 181) are responsible for the ongoing monitoring and reporting on programmes (including the Higher Diploma). • Policy and Procedure are also in place to monitor work placements: <ul style="list-style-type: none"> ○ CCT's work placement policy provided in <i>Appendix 9 - Work</i> 	f) The programme-specific quality assurance arrangements are consistent with QQI's statutory QA guidelines and use continually monitored completion rates and other sources of information that may provide insight into the quality and standards achieved.

²⁶ See also QQI's Policy on Monitoring (QQI, 2014)

	<p><i>Placement Allocation, Support and Quality Assurance.</i></p> <ul style="list-style-type: none"> ○ Programme specific work placement handbook provided in <i>Appendix 12 - Work Placement Handbook.</i> 	
Yes	<ul style="list-style-type: none"> ● There are arrangements in place in respect of the operation and management of programmes at CCT that are well documented. 	g) The programme operation and management arrangements are coherently documented and suitable.
Yes	<ul style="list-style-type: none"> ● CCT has agreed policy and procedure with QQI for the following: <ul style="list-style-type: none"> ○ Transfer of assessment results; ○ Endorsing learner achievement of programme learning outcomes; ○ Appeals; ○ Facilitating the production of parchments; ● <i>Section 9.1</i> details procedures relating to QQI certification. 	h) There are sound procedures for interface with QQI certification.

13 Overall recommendation to QQI

13.1 Principal programme

Select one	
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and Criteria for the Validation by QQI of programmes of education and training;
	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (minor) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination); ²⁷
	Not satisfactory.

13.1.1 Reasons²⁸ for the overall recommendation

²⁷ Normally an application that fails to meet the criteria in any of its aspects will be considered as not satisfactory. Nevertheless, so as to ensure that the validation process will not be implemented unreasonably, if an independent evaluation finds that a programme virtually meets the validation criteria but needs some minor modifications, the independent evaluation could conclude “Satisfactory subject to recommended special conditions” where the special conditions prescribe the defects that require to be corrected.

²⁸ Give precise reasons for the conclusions organised under each of the 12 criteria (for the programme and each embedded programme and any modules proposed to lead to QQI awards) citing supporting evidence. If any criteria or sub-criteria are not met by the application this must be stated explicitly giving precise reasons with evidence. A “Not Satisfactory” recommendation may be justified if any one of the applicable criteria or sub-criteria are not demonstrated to be satisfied.

Commendations

The panel would like to commend CCT on:

- the quality and comprehensiveness of the programme documentation submitted for consideration.
- the engagement, passion and enthusiasm of the programme development team during the programme validation site visit. The development of the programme was clearly a collaborative effort.
- The use of varied assessment strategies and teaching and learning strategies (including individual, group, and peer) and the commitment to providing an excellent student experience for learners on the programme (including the provision of laptops for student use).
- The use of integrated and cross-modular authentic assessment.
- The embedding of professional practice, transferable skills and collaborative tools (e.f. Slack and Asana) in the programme.

Summary of recommended conditions

1. For learners that enter the programme with an NFQ Level 7 major award or equivalent, the programme development team must clearly articulate the entry requirements including experience, indicating that at least **60 credits** of new learning must be completed in order to gain the award of Higher Diploma in Science in Computing.

Summary of recommendations to the provider

1. The programme development team should provide clarity on the employment opportunities (e.g. graduate profiles) that will typically be available to graduates of this programme.
2. The summary table containing the mapping of module learning outcomes to programme learning outcomes is inaccurate (pg. 36) and should be corrected as appropriate.
3. The programme development team should clearly specify the mechanisms that are in place to support diverse learner cohorts (international, etc.).
4. The following should be included in the *Guided-Technology Project* module descriptor (or elsewhere as deemed appropriate by the team):
 - Indicative industry-related projects;
 - Project management plan.
5. Electives – The programme development team should ensure that the minimum intended learning outcomes for the elective modules in Work Placement and Project should broadly align and encourage use of work-based projects in the Project module.
6. The programme development team should review the module *Strategic Business IT* in the context of transferable skills for the learners on this programme. Consideration should be given to the addition of topics such as Agile Methodologies and DevOps (see 8. below).

7. An indicative assessment schedule must be provided for the prospective learner.
8. The programme development team should consider the following feedback relating to the programme's modules:

Module Title	Comment(s)
General (applicable to all modules)	<ul style="list-style-type: none"> • Update specific module descriptors to ensure syllabus content aligns to minimum intended module learning outcomes (MIMLOs). • Ensure that module assessments strategies in each module descriptor are consistently presented and include the following: assessment type, description, module learning outcomes measured, weighting. • Reading lists in each module descriptor should be reviewed to ensure that are as up to date and relevant.
Module1: Software Development Fundamentals	<ul style="list-style-type: none"> • The Panel had no comment on this module
Module 2: Web Development	<ul style="list-style-type: none"> • The team should consider moving some content to Databases module to avoid repetition
Module 3: Databases	<ul style="list-style-type: none"> • Consider adding the following topics to the module: <ul style="list-style-type: none"> ○ NoSQL ○ In memory databases
Module 4: Networking and Virtualisation	<ul style="list-style-type: none"> • Expand network topologies section.
Module 5: Operating Systems and Architecture	<ul style="list-style-type: none"> • The cross-modular assessment discussed during the site visit needs to be included in either the module descriptor and/or programme assessment strategy. • Review the syllabus content and consider adding the following topics to the module: <ul style="list-style-type: none"> ○ IoT; ○ Storage – Cloud (AWS), RAID.
Module6: Strategic Business IT	<ul style="list-style-type: none"> • Consider adding the following topics to the module: <ul style="list-style-type: none"> ○ Agile Methodologies ○ DevOps
Module 7: Professional Practice in IT	<ul style="list-style-type: none"> • Consider adding the following topics to the module: <ul style="list-style-type: none"> ○ Change management.

Module 8: Algorithms and Constructs	<ul style="list-style-type: none"> The Panel welcomed this module and note the pressing industry need for potential job applicants to have undertaken studies in this specific area
Module 9: Mobile Development	<ul style="list-style-type: none"> The programme development team should consider revising the assessment breakdown in the module. It is currently specified as with two components with weightings of 55% and 45%. This would appear to be out of line with other modules.
Module 10: Cloud-based Web Applications	<ul style="list-style-type: none"> Remove the last bullet point “Custom Dynamically Web API Endpoints” in topic 3 - Application Data Storage and Data Transportation).
Module 11: Guide Technology Project Module 12: Work Placement	<ul style="list-style-type: none"> CCT should have full control over the assessment of the work placement. The line on pg. 164 “<i>Work Placement will be further assessed independently by the Work Placement supervisor and the CCT supervisor</i>” should be amended/removed.

Declarations of Evaluators’ Interests

This report has been agreed by the evaluation panel and is signed on their behalf by the chairperson.

Panel chairperson: Mr David Denieffe

Date: 4th July 2017

Signed:

13.2 Disclaimer

The Report of the External Review Panel contains no assurances, warranties or representations express or implied, regarding the aforesaid issues, or any other issues outside the Terms of Reference.

While QQI has endeavoured to ensure that the information contained in the Report is correct, complete and up-to-date, any reliance placed on such information is strictly at the reader’s own risk, and in no event will QQI be liable for any loss or damage (including without limitation, indirect or consequential loss or damage) arising from, or in connection with, the use of the information contained in the Report of the External Evaluation Panel.

Part 3: Proposed programme schedules – Full-time

Name of Provider:		College of Computing Technology											
Programme Title		Higher Diploma in Science in Computing											
Award Title		Higher Diploma in Science in Computing											
Stage Exit Award Title³		N/A											
Modes of Delivery (FT/PT):		FT											
Teaching and learning modalities:		Classroom Instruction, Independent Learning, Work Based Learning											
Award Class ⁴	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, ..., or Award Stage):	Stage NFQ Level ²	Stage EQF Level ²	Stage Credit (ECTS)	Date Effective	ISCED Subject code					
Major	8	6	Award	8	6	75	September 2017	0610					
Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module Status ⁹	NFQ Level ¹ where specified	Credit Number ⁵	Total Student Effort Module (hours)				Allocation Of Marks (from the module assessment strategy)				
				ECTS Credits	Total Hours	Class (or equi) Contact	Directed e-learning	Hours of Independent learning	Work-based learning	C.A. %	Supervised Project %	Practical demonstration	Proctored practical
1 Software Development Fundamentals	1-2	M	8	10	250	78	0	172	0	30	30	40	0
2 Web Development	1	M	8	5	150	39	0	111	0	15	25	10	50
3 Databases	1	M	8	5	150	39	0	111	0	30	0	20	50
4 Networking	1	M	8	5	150	39	0	111	0	30	50	20	0
5 Operating Systems & Architecture	1	M	8	5	150	39	0	111	0	25	50	25	0

⁹ Mandatory (m) or elective (E)

¹⁰ Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.

6 Strategic Business IT	1	M	8	5	150	39	0	111	0	60	40	0	0
7 Professional Practice in IT	2	M	8	5	150	39	0	111	0	60	40	0	0
8 Algorithms and Constructs	2	M	8	10	250	78	0	172	0	20	40	40	0
9 Mobile Development	2	M	8	5	150	39	0	111	0	55	45	0	0
10 Cloud Based Web Applications	2	M	8	5	150	39	0	111	0	15	25	10	50
11 Guided Technology Project	3	E	8	15	375	39	0	336	0	0	100	0	0
12 Work Placement	3	E	8	15	375	39	0	36	300	0	100	0	0

Special Regulations (Up to 280 characters)

As assessment of skills is an important part of this programme, students are required to pass practical continuous assessment in order to pass the module. The special regulation applies to modules 1, 2, 3, 4, 5, 8, 9, 10 and 12.

Part 3: Proposed programme schedules – Part-time

Name of Provider:		College of Computing Technology											
Programme Title		Higher Diploma in Science in Computing											
Award Title		Higher Diploma in Science in Computing											
Stage Exit Award Title³		N/A											
Modes of Delivery (FT/PT):		PT											
Teaching and learning modalities:		Classroom Instruction, Independent Learning, Work Based Learning											
Award Class ⁴	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, ..., or Award Stage):	Stage NFQ Level ²	Stage EQF Level ²	Stage Credit (ECTS)	Date Effective	ISCED Subject code					
Major	8	6	Award	8	6	75	September 2017	0610					
Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module		Credit Number ⁵ ECTS Credits	Total Student Effort Module (hours)					Allocation Of Marks (from the module assessment strategy)			
		Status ¹¹	NFQ Level ¹ where specified		Total Hours	Class (or equiv)	Contact hours	Directed e-learning	Hours of Independent learning	Work-based learning	C.A. %	Supervised Project %	Practical demonstration
1 Software Development Fundamentals	1-2	M	8	10	250	78	0	172	0	30	30	40	0
2 Web Development	1	M	8	5	150	39	0	111	0	15	25	10	50
3 Databases	1	M	8	5	150	39	0	111	0	30	0	20	50
4 Networking	1	M	8	5	150	39	0	111	0	30	50	20	0
5 Operating Systems & Architecture	2	M	8	5	150	39	0	111	0	25	50	25	0
6 Strategic Business IT	2	M	8	5	150	39	0	111	0	60	40	0	0
7 Professional Practice in IT	2	M	8	5	150	39	0	111	0	60	40	0	0

¹¹ Mandatory (m) or elective (E)

¹² Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.

8 Algorithms and Constructs	3	M	8	10	250	78	0	172	0	20	40	40	0
9 Mobile Development	3	M	8	5	150	39	0	111	0	55	45	0	0
10 Cloud Based Web Applications	3	M	8	5	150	39	0	111	0	15	25	10	50
11 Guided Technology Project	4	E	8	15	375	39	0	336	0	0	100	0	0
12 Work Placement	4	E	8	15	375	39	0	36	300	0	100	0	0

Special Regulations (Up to 280 characters)

As assessment of skills is an important part of this programme, students are required to pass practical continuous assessment in order to pass the module. The special regulation applies to modules 1, 2, 3, 4, 5, 8, 9, 10 and 12.

Part 4: Detailed evaluation of the programme's modules and stages that do not directly lead to QQI awards

Not applicable