TALLAGHT EXTERNAL VALIDATION

REPORT FOR

APPRENTICESHIP AT

Level 6 Higher Certificate in Science – Laboratory Technician

Level 7 Bachelor of Science – Laboratory Analyst

School of: **Science & Computing**

Department of: Applied Science

Panel Meeting date:	22nd June 2018	
Decision: *tick one only*	Recommended	
	Recommended subject to modification	X
	Not recommended	

Proposed Commencement Date:	2018
Period of Validation:	5 years from September 2018

EXTERNAL REVIEW PANEL REPORT

PART 1:

1.1 GENERAL INFORMATION

School	Science & Computing
Department	Applied Science
Date of panel visit	22nd June 2018
Programme evaluated	1. Higher Certificate in Science – Laboratory Technician 2. B.Sc. Ordinary Degree in Science – Laboratory Analyst
NFQ Level	1. Level 6 – Higher Certificate 2. Level 7 – BSc Ordinary
Programme approved titles	1. Higher Certificate in Science – Laboratory Technician 2. B.Sc. Ordinary Degree in Science – Laboratory Analyst
Delivery Mode(s)	FT & PT - Apprentice
Panel	1. Chair: Denis Cummins Dean of Academic Affairs, Hibernia College 2. Dr Arjan Van Rossum, Head of Department of Science, Institute of Technology Dundalk 3. Michelle Roe, Deputy Manager QC Department, Curam Medical Ltd., Dublin 4. Suzanne Lovely, QC Manager, Pfizer Global Supply, Newbridge
	Secretary: Dr K Carroll, Registrar, IT Tallaght

Industry Consortium members		
Name	Company	Role in Apprenticeship Development
Andrew Hayes	Helsinn Birex Pharmaceuticals Ltd, HR Director	Chair of Laboratory Industry Consortium

Ciaran Crosbie	Alexion Pharma International Operations UC - Senior Manager	Vice Chair of Laboratory Industry Consortium
Siobhán Dean	BioPharmaChem Ireland, IBEC - Education and Public Affairs Executive	Project lead
Orla Reynolds	BioPharmaChem Ireland, IBEC - BPCI Apprenticeships Project Manager	Project Manager

1.2 INSTITUTE STAFF

Name	Grade / Responsibility
J Behan	Head of Dept. of Applied Science, IT Tallaght & Program Leader
D Egan	Lecturer in Science, IT Tallaght
B O'Hanrahan	Lecturer in Science, IT Tallaght
G Cooke	Lecturer in Science, IT Tallaght
M Walsh	Lecturer in Science, IT Tallaght
G Colleran	Senior Lecturer in Science, IT Tallaght
D Faller	Dean of Faculty of Science and Health, Athlone Institute of Technology
M Walsh	Lecturer in Chemistry, Limerick Institute of Technology
A Furey	Senior Lecturer in Chemistry, Cork Institute of Technology
K Tobin	Programme Manager, Centre for Online Learning, Institute of Technology Sligo

PART II COMMENDATIONS, RECOMMENDATIONS & CONDITIONS

The External Review panel recommends the validation of the programmes:

1. *Higher Certificate in Science – Laboratory Technician*
2. *B.Sc. Ordinary Degree in Science – Laboratory Analyst*

for the purpose of the award of:

1. *Higher Certificate in Science*
2. *Bachelor of Science*

Subject to the conditions and recommendations set out below:

2.1 Commendations:

Points of note commended by the panel.

1. The strong links established between companies, industry representative bodies, and Institutes of Technology in the design of the proposed programmes.
2. The comprehensive structures developed to support the delivery of the proposed programmes on a national basis with a single point of contact for applicants to ensure consistency, transparency and equity of access to the programmes.
3. The close alignment of the programme design process with identified needs of industry sector.
4. The strategic vision of the Department in identifying new opportunities for programme provision that is both relevant and topical.

2.2 Conditions:

The evaluation panel requires that the Programme Development Team should take note of the following conditions and that a satisfactory response to those conditions shall be received before the validation is considered by Academic Council of the Institute.

Conditions: None

2.3   Recommendations:

Recommendations are suggestions made by the Programme Evaluation Panel in the spirit of improving the proposed programme.   While these are not binding, the reasons for not incorporating a recommendation have to be clearly stated by the Programme Development Team in its response to the Evaluation Report.

Recommendations:

1. A sectoral guideline is in preparation on rates of pay for apprentices from their host companies. It is recommended that this guideline be finalized before commencement of the proposed programmes.

    a. This has been discussed and a salary band agreed with the Laboratory Apprenticeship Consortium.

2. Create a schematic to clearly illustrate the linkages between students, HEI's and companies indicating the roles and responsibilities of each. This schematic may also be helpful in the promotion of the programme.

    a. This has been developed and is included within Laboratory Apprenticeship presentations and documentation.

3. The panel recommends that a contingency be established for industry mentors in case of key persons being on annual leave, maternity leave, sick leave, or where this person departs from the company. This contingency will provide for a smooth handover of the student/apprentice to another including records/reports on their progress to date.

    a. The Consortium have advised participating companies to identify and train at least two mentors in case of primary mentor being unavailable etc. This has been included within the submission document.

4. It is recommended that learning outcomes and their assessment be reviewed to ensure that over-assessment is avoided. A semester-by-semester matrix of modules and expected deliverables week-by-week should also be developed to clearly indicate and manage student workload over each semester.

    a. Learning outcomes and their assessment will be reviews in order to ensure over assessment is avoided. Secondly a week by week schedule of deliverables for the entire semester across all modules will be developed at the start of the semester in order to manage and spread the student workload evenly over each week of the semester.

5. Reflective diary (Student Diary Pro or equivalents) are to be used to support student learning within the workplace. It is recommended that there be a mapping out of expected learning for each week of the programme to ensure avoidance of duplication of entries and to encourage and support students in

demonstrating the development of their learning (breadth and depth) in each module area.

    a. A reflective diary will be used to support learning in the workplace and the expected learning outcomes will be mapped out for each week

6. In the Validation – Laboratory Analyst module in Semester 5, learning outcomes 1 & 2 are very similar to learning outcome 6. It is recommended that either LO 6 be removed or LO 1&2 be removed.

    a. As LO 6 is very similar to LO 1 & 2, LO 6 will be removed from the module

7. The start date for the programme and first intake of students should be clarified. It is unclear from the documentation if this is September 2018 or later.

    a. This clarification has been included within the submission document the first intake in IT Tallaght only will be in September 2018

PART III   FINDINGS OF THE VALIDATION PANEL

3.1   INTRODUCTION

Comment:

The panel met in private session prior to meeting academic staff to discuss the submission document. A detailed discussion was held with the industry representatives to explore the relevance and alignment of the proposed programme with the needs of the industry sector. The panel were satisfied that this is the case as reflected in the commendations made.

The panel was welcomed to the Institute by the President of IT Tallaght. He provided an overview of the current position of the Institute, the partnership between IT Tallaght, IT Blanchardstown and Dublin Institute of Technology and the efforts of this alliance to progress towards becoming a Technological University.

The President spoke of the strategic positioning of IT Tallaght within its region, the strong regional focus, linkages with industry and the determination to maintain this regional connection should ITT become part of a Technological University. In support of the continuing role of the ITT campus within the region, the President outlined the capital development plans being advanced for the campus including two new buildings in planning, and the acquisition of another adjacent to the campus.

3.2   MEETING WITH MANAGEMENT AND STAFF

The external panel met with the programme development team and the Head of Department. Discussions took place on origin of the proposed programme, and how it fits into the strategic direction of the Department. The role of the industry consortium working with IT Tallaght in the design of these two apprenticeship programmes was described.

Discussions included a focus upon the rationale for the programmes, the need for such programmes within the sector and the support for this initiative across the industry including the sectoral representative bodies (IBEC and BPCI), and the active engagement of over twenty companies over two years in the discussions surrounding the structure and content design for the programmes.

3.3   Programme Title and Award Title.

Comment: The panel were satisfied that the proposed programme titles are clear and appropriate. The Award titles for the Level 6 Higher Certificate in Science and the Level 7 Bachelor Degree in Science are also appropriate with each being consistent with the relevant Level 6 and 7 national award standards. Furthermore, each satisfies the requirements under the new apprenticeship model.

3.4   Justification for the Programmes

Comment: The need for and justification for the proposed programmes was discussed. The Panel was satisfied that a market exists for graduates of the proposed programmes. The Panel commended the Department for its level of close industry engagement and responsiveness to sector needs.

The industry consortium provided an overview of the findings of the Expert Group on Future Skill Need with regard to the Bio/Pharma sector, the skillsets required to work in the industry, and the appropriateness of a mixed model of education and training involving apprentice and traditional higher education qualifications.

3.5   Conformance with Institute's Mission and Strategy

Comment: The panel was satisfied that the proposed programme conformed to the Institute's mission of providing learners with flexible higher education opportunities which are of the highest quality.

3.6   Access, Transfer and Progression Arrangements

Comment: The panel was satisfied with the arrangements stated for access and progression. It was noted that the proposed programmes support a broadening of access to higher education providing an alternate path towards tertiary qualifications.

Those already in work within the sector may continue to access alternate routes to qualification via the long established traditional flexible part-time programmes provided by IT Tallaght targeted particular at workers within the sector and/or those seeking to change career path into the sector.

A range of opportunities exist for graduates to progress in association with IT Tallaght and other HEIs onto higher level qualifications.

3.7   Programme Structure and Design

Comment: The programme structure and design were well documented and the panel was satisfied with the information supplied. A discussion took place on the proposed structure of the programme, the choice of modules provided, and the available electives. How well the programme addresses current topical issues relevant to the industry sector was also explored. The involvement of the industry consortium in shaping the content of the various modules was also noted.

3.8   Programme Learning Outcomes and Award Standards.

Comment: The panel was satisfied that the learning outcomes of the individual programmes were consistent with the relevant Award Standards. Some minor adjustments to learning outcomes were suggested (see recommendations above).

3.9   Teaching and Learning Strategy

Comment: The proposed approaches to teaching and learning were indicated and justified. The use of a 2 + 3 day college – industry model was explored. The programme developers and the industry consortium justified this based on providing a greater continuity of learning for the student with constant reinforcement of classroom learning with work-based learning. It was also suggested that such a model will provide less disruptive for learners as compare to, for example a semester on/off approach where they may have to relocate for accommodation etc.

All modules are provided as mandatory. This decision was taken to ensure a consistency of learning with respect to generic and transferable skills for all learners. Each learner will be based with a specific company for the duration of their programme and it is here that they will be exposed to the particular skills for that type of manufacturing. Learning will be managed through work-based learning projects in each semester to develop particular skillsets. Groupwork will form part of this as each student will be located with a team in company.

The panel was satisfied that adequate provision is given to the induction and preparation of work-based mentors who will not be the student's line supervisors/managers. This will include a focus on their specific roles and responsibilities. Academic assessment will be done by academic staff of the Institute.

All students will undergo an initial two week induction programme in college before commencing their work-based learning. This will include modules on Critical Skills Development, Health & Safety and Good Manufacturing Practice. In addition, each student will receive an induction programme with their host company.

Academic teaching and learning will use a mix of classroom, online, and workshop modes of delivery. Students will be encouraged and supported to develop an independent learning capability.

All HEIs delivering the programme will use the same modules, and teaching, learning and assessment strategies to ensure a consistency of learning experience for students across the country.

IBEC will provide a programme manager. Consortia meetings will be held 3 times each year to ensure consistency of approach is maintained, share experiences and to maintain the quality of the programme.

3.10 Learner Assessment

Comment: Approaches to learner assessment were clearly described and documented. Work based learning will be reported by students via reflective diaries. It is recommended that there be a mapping out of expected learning for each week of the programme to ensure avoidance of duplication of entries and to encourage and support students in demonstrating the development of their learning (breadth and depth) in each module area. Learner assessment will be done by academic staff from the host HEI.

3.11 Quality Assurance

Comment: The panel was satisfied with the quality assurance procedures applied to the development of the proposed programme and that necessary provision is made for ongoing monitoring and review.

Programme Boards will provide regular oversight of the programme for each HEI involved. IBEC will provide a programme manager and organize consortia meetings 3 times each year to ensure consistency of approach is maintained, share experiences and to maintain the quality of the programme. Programme Boards will have student representation.

3.12 Information Provision

Comment: The panel recommended that public information with regard to pre-requisite learning to satisfy eligibility for access to the programme requires greater clarity.

A sectoral guideline is in preparation on rates of pay for apprentices from their host companies. It is recommended that this guideline be finalized before commencement of the proposed programmes. This is to avoid disputes and provide clarity for applicants.

IBEC will provide a web based promotional campaign for the programme including application process. Interested companies, approved by SOLAS, will provide the work-based learning.

It is recommended that a clear schematic be created to clearly illustrate the linkages between students, HEI's and companies indicating the roles and responsibilities of each.

3.13 Library and Physical Facilities / Resources

Comment: The panel was satisfied that the staffing and physical resources were available to deliver the proposed programme.

3.14 Learner Support Services

Comment: The panel was satisfied that adequate provision is provided to support learners. These include academic leaders, programme boards with student and industry representation, work-based mentors, a national point of contact (Programme Manager), as well as access to the normal learner supports provided by colleges for students generally.

3.15 Academic Staff and Qualifications

Comment: The panel was satisfied that the lecturing and support staff is available within the Institute to deliver the content of this programme.

PART IV: APPROVED COURSE SCHEDULES

Level 6 Higher Certificate in Science –Laboratory Technician

Stage 1 / Semester 1

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Lab Safety_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	GMP_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	100	0
No Code Yet	Maths for Apprenticeship Program (Draft)	JOHN BEHAN	6	5	0.00	2.00	40	60
CSKD H1000	Critical Skills Development (Approved)	PHIL MULVANEY	6	5	3.00	2.00	100	0
No Code Yet	Introduction to Microbiology & Biotechnology (Draft)	Barbara OHanrahan	6	10	0.00	4.00	50	50

Stage 1 / Semester 2

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Fundamentals of Chemistry_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	4.00	50	50
No Code Yet	Computer Systems_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	100	0
No Code Yet	Lab Quality Systems_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	Calibration sciences_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	3.50	50	50
No Code Yet	Workplace based learning 2-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	6	10	0.00	0.00	100	0

Stage 2 / Semester 3

Mod Code	Module Title	Coordinator	Level	Credits	FT Contact Hours	PT Contact Hours	Course Work	End of Module Formal Examination
Mandatory								
No Code Yet	Stability & Sample Analysis_L6_Apprenticeship (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	Microbiology & Environmental Monitoring _L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	10	0.00	4.00	50	50
No Code Yet	Instrumentation_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	4.00	50	50
No Code Yet	Workplace based learning 3-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	6	10	0.00	0.00	100	0

Stage 2 / Semester 4

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Regulatory Affairs & Compliance_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	40	60
No Code Yet	Lean Labs_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	Chemistry2_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	3.00	50	50
No Code Yet	Analytical Lab Skills 1 _L6_Apprenticeship (Draft)	JOHN BEHAN	6	5	0.00	2.00	100	0
No Code Yet	Workplace based learning 4-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	6	10	0.00	0.00	100	0

Level 7 Bachelor of Science – Laboratory Analyst

Stage 1 / Semester 1

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Lab Safety_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	GMP_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	100	0
No Code Yet	Maths for Apprenticeship Program (Draft)	JOHN BEHAN	6	5	0.00	2.00	40	60
CSKD H1000	Critical Skills Development (Approved)	PHIL MULVANEY	6	5	3.00	2.00	100	0
No Code Yet	Introduction to Microbiology & Biotechnology (Draft)	Barbara OHanrahan	6	10	0.00	4.00	50	50

Stage 1 / Semester 2

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Fundamentals of Chemistry_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	4.00	50	50
No Code Yet	Computer Systems_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	100	0
No Code Yet	Lab Quality Systems_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	Calibration sciences_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	3.50	50	50
No Code Yet	Workplace based learning 2-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	6	10	0.00	0.00	100	0

Stage 2 / Semester 3

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Stability & Sample Analysis_L6_Apprenticeship (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	Microbiology & Environmental Monitoring _L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	10	0.00	4.00	50	50
No Code Yet	Instrumentation_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	4.00	50	50
No Code Yet	Workplace based learning 3-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	6	10	0.00	0.00	100	0

Stage 2 / Semester 4

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Regulatory Affairs & Compliance_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	40	60
No Code Yet	Lean Labs_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	2.00	50	50
No Code Yet	Chemistry2_L6_Apprenticeship Technician (Draft)	Barbara OHanrahan	6	5	0.00	3.00	50	50
No Code Yet	Analytical Lab Skills 1 _L6_Apprenticeship (Draft)	JOHN BEHAN	6	5	0.00	2.00	100	0
No Code Yet	Workplace based learning 4-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	6	10	0.00	0.00	100	0

Stage 3 / Semester 5

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Validation -Laboratory Analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	50	50
No Code Yet	Technical writing lab analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	100	0
No Code Yet	Statistics and Analysis (Draft)	JOHN BEHAN	7	5	0.00	2.00	50	50
No Code Yet	Quality Assurance Systems-Lab analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	50	50
No Code Yet	Workplace based learning 5-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	7	10	0.00	0.00	100	0

Stage 3 / Semester 6

Mandatory								
Mod Code	**Module Title**	**Coordinator**	**Level**	**Credits**	**FT Contact Hours**	**PT Contact Hours**	**Course Work**	**End of Module Formal Examination**
No Code Yet	Analytical Chemistry-Laboratory Analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	30	70
No Code Yet	GMP & DATA integrity-laboratory analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	60	40
No Code Yet	Case studies & problem based learning-laboratory analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	100	0
No Code Yet	Analytical Lab Skills 2 -Laboratory analyst (Draft)	JOHN BEHAN	7	5	0.00	2.00	100	0
No Code Yet	Workplace based learning 6-Laboratory analyst (Draft) (Draft)	JOHN BEHAN	7	10	0.00	0.00	100	0

Part V: Approval

Programme Evaluation Report Approved by:

Signature: *[signature: Denis Cummins]*	Signature: *[signature: Ken Carroll]*
Print name: Mr Denis Cummins	Print name: Dr Ken Carroll
Chairperson to Panel	Secretary to Panel
Title: Dean of Academic Affairs, Hibernia College	Title: Registrar, IT Tallaght
Date: 37/8/2018	Date: 31-Aug-2018