Programme Validation Report

TU889 BSc(Hons) Biotechnology*[1]

Version of Report	*Author*	*Date*
1.0	Dr Linda Moore	10/05/2023
2.0	Dr Linda Moore	11/05/2023
3.0	Dr Linda Moore	19/06/2023
		Click or tap to enter a date.

Approval	*Date*
Programme Proposal approved by Faculty Board	24/01/2023
Programme Proposal approved by University Programmes Board	09/03/2023
Programme approved by Faculty Board	Click or tap to enter a date.
Programme approved by University Programmes Board	Click or tap to enter a date.

Section A - Programme Details

Title	*Bachelor of Science (Honours) in Biotechnology*
NFQ Level	8
ECTS Credits	240
Mode of delivery	Part-time ☐ Full-time ✓
Duration	Part-time: Full-time: 4 years
Mode of provision	Face-to-Face ✓ Blended ☐ Online ☐
Classification of award	*Bachelor of Science (Honours) in Biotechnology (Level 8 award):* First Class Honours; Second Class Honours, First Division; Second Class Honours, Second Division; Pass *Bachelor of Science in Biotechnology (Level 7 exit award)* *& Higher Certificate in Science (Level 6 exit award):* Distinction; Upper Merit; Lower Merit; Pass

[1] The original Programme Proposal Form (PPF) submission for this programme was under the title of *BSc(Hons) Industrial Biotechnology*. This was changed as per panel recommendation (no. 1) to *BSc(Hons) Biotechnology*.

Discipline Programmes Board	Food Science & Industrial Biotechnology
Faculty Board	Faculty of Sciences & Health
Schools involved in delivery	School of Food Science & Environmental Health (*School responsible for TU889*) School of Biological, Health & Sports Sciences School of Chemical & BioPharmaceutical Sciences
Delivery location	Primary location: City Campus, Grangegorman
Collaborative Partner (where applicable)	N/A
Date of Commencement	1st September 2024

Section B - Awards

Award Title	Bachelor of Science (Honours) in Biotechnology
NFQ Level	8
Award Class	Major
ECTS Credits	240
Classification of award	First Class Honours; Second Class Honours, First Division; Second Class Honours, Second Division; Pass
Award (1) Title	Bachelor of Science in Biotechnology
Exit/Embedded	Exit ☒ Embedded ☐
NFQ Level	7
Award Class	Major
ECTS Credits	180
Classification of award	Distinction; Upper Merit; Lower Merit; Pass
Exit Award (2)	Higher Certificate in Science in Biotechnology
Exit/Embedded	Exit ☒ Embedded ☐
NFQ Level	6
Award Class	Major
ECTS Credits	120
Classification of award	Distinction; Upper Merit; Lower Merit; Pass

Section C - Programme Derogations (if required)

Derogations from Assessment Regulations/Marks and Standards already approved by University Programmes Board	
N/A	
Date of University Programmes Board Approval	Click or tap to enter a date.

Section D Validation Process

Please tick the process that was followed:

Validation Panel ✓	AQEC Meeting ☐	AQEC Sub-Group ☐
Date: 9th May 2023	Date:	Date:

Panel Members

Name	Role	Affiliation
Dr Aidan Meade	Chair	Head of Learning Development, Faculty of Sciences & Health, City Campus, TU Dublin
Prof Ibrahim Banat	External panel member	Professor of Microbial Biotechnology, School of Biomedical Sciences, Ulster University, Northern Ireland
Dr Adrienne Fleming	Internal panel member	Senior Lecturer, School of Chemical & BioPharmaceutical Sciences, Tallaght Campus, TU Dublin
Prof Orla Howe	Internal panel member	Senior Lecturer, School of Biological, Health & Sports Sciences, City Campus, TU Dublin
Dr Linda Moore	Academic Quality Advisor/ Academic Affairs representative	Quality Framework Team, Academic Affairs, City Campus, TU Dublin

Section E - Programme Evaluation

Documentation reviewed by panel:

- Programme Validation Document
- Book of Modules for Programme TU889 – BSc(Hons) Industrial Biotechnology
- Staff Biographies
- Erasmus Handbook
- Work Placement Guide
- Student Handbook
- Final Year Project Guide
- Letters of Support for Programme

Governance & Management		
Is the programme designed in accordance with the University's Strategic Plan, Educational Model and Quality Framework?	Yes ✓	No ☐
Comment:		
Will the proposed strategies for programme management and quality assurance ensure that the programme is well managed and continuously enhanced and is in accordance with the University's Quality Framework?	Yes ✓	No ☐
Comment:		

Awards Standards		
Are the programme aims and learning outcomes clearly written using appropriate terminology? (See TU Dublin Guidelines)	Yes ✓	No ☐
Comment:		
Are the programme aims and learning outcomes aligned to the proposed level of the award on the NFQ in accordance with applicable Award Standards?	Yes ✓	No ☐
Comment:		
Will the curricula, teaching, learning and assessment methods enable students to reach the appropriate standard to qualify for the award(s)?	Yes ✓	No ☐
Comment:		
Was the programme development appropriately informed by internal and external stakeholder input (including industry/practice, professional/regulatory bodies, and community organisations)?	Yes ✓	No ☐
Comment: Written evidence provided by a number of external bodies in support of the development of this programme.		
Has the programme been benchmarked against similar programmes nationally and internationally?	Yes ✓	No ☐
Comment:		
Did the programme development take account of relevant external discipline benchmarks and Professional Statutory and Regulatory Body requirements?	Yes ☐	No ☐
Comment: There is no Professional Statutory or Regulatory Body requirement associated with this programme.		

Programme Design		
Is the programme design informed by current development in the discipline and associated subject areas, having taken into consideration current trends, stakeholder feedback and market analysis?	Yes ✓	No ☐
Comment:		
Will there be opportunities for students to input into curriculum design decisions in the future?	Yes ✓	No ☐
Comment: The TU Dublin Quality Assurance & Enhancement policies and procedures for all TU Dublin programmes include both a student feedback mechanism for individual modules and a requirement for student representation at all boards and committees governing the programme. Supports are also made available to both staff and students regarding ways in which the Student Voice can be used at all stages of programme design. https://www.tudublin.ie/explore/about-the-university/academic-affairs/our-student-voice/.		
Is there a mechanism to ensure the input of external stakeholders in the ongoing development of the programme?	Yes ✓	No ☐
Comment: While there is no single, formal mechanism in place, there is opportunity for regular engagement with external stakeholders through industry visits and student work placement, incl. work placement visits that include meetings with industry supervisors/employers.		
Is the programme curriculum well-structured with a logical progression of learning and development across the modules and stages?	Yes ✓	No ☐
Comment:		
Are there appropriate opportunities for students to undertake work-based learning, through work placements or work-based projects or assignments?	Yes ✓	No ☐
Comment:		
If applicable, have the relevant Blended Learning Checklists (i.e. Learning Experience Context & Programme Context) been fully completed and submitted to the Panel?	Yes ☐	No ☐
Comment: N/A as programme is intended for on-site delivery.		
Is the required programme and module information provided in the correct format?	Yes ✓	No ☐
Comment:		

Learning, Teaching & Assessment		
Is there an effective student-centred teaching and learning strategy that aligns with the University's strategies and Education Model?	Yes ✓	No ☐
Comment:		
Does the assessment strategy provide an appropriate mix of assessment types that will enable students to demonstrate that they have met the module and programme learning outcomes?	Yes ✓	No ☐
Comment:		

Do the learning outcomes and assessment strategy ensure that academic integrity can be maintained and attempted breaches of academic integrity are minimised/easily detected?	Yes ✓	No ☐
Comment:		
Is there a comprehensive mapping of assessment methods and module learning outcomes and between module learning outcomes and programme learning outcomes?	Yes ✓	No ☐
Comment:		
Are there opportunities in all modules to provide students with timely and constructive feedback on their learning and development?	Yes ✓	No ☐
Comment:		
Do the teaching and assessment methods consider the diversity of the student cohort?	Yes ✓	No ☐
Comment:		

Student Supports & Learning Environment		
Are there sufficient and appropriate resources (e.g. human, financial and physical) to support the proposed programme aims and objectives, to deliver the programme as specified?	Yes ✓	No ☐
Comment:		
Are there sufficient staff that are appropriately qualified and capable to support the programme delivery, from both context and pedagogy perspectives?	Yes ✓	No ☐
Comment:		
Are there appropriate arrangements in place to support the student experience and to monitor student performance?	Yes ✓	No ☐
Comment:		
Are the access, transfer and progression arrangements clearly defined and appropriate, and aligned to TU Dublin policy/strategy in this regard?	Yes ✓	No ☐
Comment:		
Do the student supports and learning environment cater for equality, diversity and inclusivity of students?	Yes ✓	No ☐
Comment:		
Is the relevant programme information clearly communicated to the students to ensure they are informed, guided and cared for?	Yes ✓	No ☐
Comment:		
Has the Checklist for First Year Student Success (where applicable) been fully completed and submitted to the Panel?	Yes ✓	No ☐
Comment:		

While the Checklist itself was not used, most elements of this checklist have been incorporated into the programme's plans for Student Induction and Extended Induction (as per the validation material document submitted).

Collaborative Provision (if applicable)		
Are the roles and responsibilities of each partner clearly defined?	Yes ☐	No ☐
Comment: N/A		
In the case of Joint or Multiple Awards, has due diligence on capacity of partner institution meeting the QA-QE requirements for the programme been undertaken?	Yes ☐	No ☐
Comment: N/A		

Section F - Overall Recommendation

1.	**Recommend approval of programme as submitted, without amendment**	☐
2.	**Recommend approval of programme, subject to minor amendments/editorial changes to be completed as soon as possible and with recommendations for consideration.** **Note:** recommendations are attached where it is considered that the programme would benefit from particular changes, or from a review of certain aspects of the programme over a period of time, with changes made if required. While recommendations are advisory in nature, there is an expectation that all recommendations are responded to appropriately and acted upon as appropriate.	☐
3.	**Recommend approval of programme subject to the fulfilment of conditions. Recommendations for consideration may also be attached.** **Note:** conditions are attached where it is agreed that changes must be made to the programme / programme documentation prior to the commencement of the programme. Conditions must be set where issues are identified that relate directly to academic standards or to University regulations or procedures. It should be clear what is required in order to meet the conditions. A new programme cannot go forward to Faculty Board for consideration/approval unless a response to the Validation Report is submitted with revised programme documentation and the Academic Quality Enhancement Committee is satisfied that all conditions are met.	☒
4.	**Do not recommend approval of programme.**	☐

Areas for commendation	
1.	Validation documentation was comprehensive and prepared to a high standard.
2.	Programme staff are knowledgeable, committed and dedicated.
3.	The laboratory facilities are of a high standard and will provide students of this programme with the opportunity to learn contemporary practical skills related to their programme of study.
4.	There is strong evidence of programme development and intended delivery being informed by industry requirements, thereby enhancing the employability of potential graduates of this programme.

Conditions of Approval	
1.	• Removal of the 60% lecture attendance requirement from general programme documentation (on the basis that there is no General Assessment Regulation or other, e.g. regulatory body, requirement for such an attendance threshold to apply). • Where mandatory laboratory attendance requirements apply, these should be clearly communicated to students in the Student Handbook.
	Response: The statement relating to a 60% lecture attendance requirement has been removed from the programme documents. A note has been added to section *1.5 Programme Delivery and Attendance Requirements* of the Student handbook to explicitly state the 75% lab attendance requirement.
2.	The Award Classification in the Programme Module Catalogue (PMC) documentation must be revised to the following for the Second Class Honours Description: Second Class Honours (First Division) & Second Class Honours (Second Division) (replacing 'Upper' with 'First' and 'Lower' with 'Second'). (This is to ensure consistency with the General Assessment Regulation Nomenclature and nomenclature used elsewhere in programme documents)
	Response: This change replacing 'Upper' with 'First' and 'Lower' with 'Second' for the BSc(Hons) has been made in the Programme Module Catalogue (PMC) documentation.
3.	Removal of the statement related to programme derogations within the programme document in the Programme Module Catalogue (PMC), as this is inconsistent with the other documentation submitted for the programme validation.
	Response: This statement has been removed.

Recommendations	
General Recommendations	
1.	*The panel strongly recommend that the name of the proposed programme should be changed to BSc(Hons) Biotechnology, with the associated exit award: BSc(Ord) Biotechnology. The rationale behind this is that this is more inclusive of the broad scope of possible Biotechnology applications.
	Response: The School Executive and programme team accepts the panel's recommendation relating to the programme title. Changes have been made to programme documents including the Student handbook and the WP FYP, Erasmus guides to reflect the recommended programme title of BSc (Hons) Biotechnology.
2.	Consideration should be given to the combination and streamlining of some modules where some overlap and communalities of module content exist. This should also be cognisant of the overall workload of the students within any new modules arising out of the merger of existing modules. Modules that could be considered for consolidation are, for example: *TFPT2001 Introduction to Process Technology* (Stage 2) and *TFPT 4002 Process Analytic Technology*. *(Code pending) Quality Systems for Biotechnology* (Stage 2) and *TFPJ 4000 Responsible Project Management and Information Access.* *(Code pending) Environmental Sustainability & Bioeconomy* and *(code pending) Biorefinery and Bio-based Products.*
	Response: The below modules were considered for consolidation by the programme team and a rationale has been provided for not doing so at this time. ***TFPT2001 Introduction to Process Technology* (Stage 2) and *TFPT 4002 Process Analytic Technology*.** The TFPT2001 module is an introductory module while TFPT4002 is a more advanced module. TFPT2001 Introduction to Process Technology is a module introducing basic engineering knowledge and concept to science students since this programme has a focus of biotechnology manufacturing in the curriculum, for example basic units/equipment (valves, pump, compressor, heat exchanger, reactor, etc), process systems (heat exchange, hydraulic, cooling-tower), as well as applied physics (energy balance, energy transfer, deformation, fluid dynamics, etc). Process Analytical Technology is an advanced tool of Quality by Design, which has been increasingly adopted by the biotech and pharma industry. It is focused on in-line, online and at-line analysis of a process in order to provide real-time measurement and monitoring. This

	module introduces different types of PAT instruments, their working principles and interpretation of data (key element). ***BTEC 1011 Quality Systems for Biotechnology* (Stage 2) and *TFPJ 4000 Responsible Project Management and Information Access.*** The Quality Systems for Biotechnology module relates to quality systems in the food or BioPharma industries whereas TFPJ4000 is associated with the student 4th year projects. The programme team believe that both modules are required and there are no commonalities to address in this case. ***BIOE 1002 Environmental Sustainability & Bioeconomy* and *BIOE 1001 Biorefinery and Bio-based Products.*** The two modules are different: Environmental Sustainability & Bioeconomy module takes a big picture approach to the bioeconomy, the need for a managed use of biological resources, their multipurpose applications (bioeconomy, but also societal, environmental) and the policy that guides this. Biorefinery and Bio-based Products module is the scientific detail/methodology as to how we transform biological waste into value add e.g. timber chips into a bioplastic. Regarding the needs of the agri-food sector the programme team believe the Biorefinery and Bio-based Products is vital, as it is the "how" of becoming more sustainable. The programme team believe that both modules are required.
3.	There are a number of modules emphasising analytical methods in the programme. The necessity of so many analytical methods modules in a Biotechnology programme was queried by the panel. It is recommended to review these with a view to streamlining and consolidating some of these modules. Particular attention should be paid to ensuring that the module content, assessment and associated learning outcomes are aligned with Level 8 study (not Level 9 study).
	Response: The programme team believe that having the two Instrumentation modules in year 2 help the students to develop strong analytical skills, which have been flagged as important by industry stakeholders. The modules underpin techniques in other modules and prepare students for a wider breadth of lab-based work placement opportunities in year 3. This also opens opportunities for a wide variety of projects to be undertake by the students. The stage 4 module, FOOD4005 has been revised as part of this validation process to embed sustainability aspects and to update the reading list. The programme team will ensure the module delivery is at an appropriate UG level.
4.	Consideration should be given to the inclusion of new modules, or as part of existing modules, content on: • Plant and animal biotechnology. • Fermentation biotechnology. • Marine biotechnology.

	Response: Plant and animal biotechnology have been further explicitly embedded into the indicative syllabus of BTEC 1009 Introduction to the Biotechnology Sector. For example *Green biotechnology for agricultural process Eg: Development of transgenic plants using plant tissue culture)* *Red biotechnology or medical Biotechnology to produce drugs, antibodies and other biologics using animal cell culture.* *Significance of biological molecules such as DNA and proteins in plant and animal biotechnological applications* Plant aspects are also covered in the indicative syllabus of FOBE 1003 Agri-food & Beverage Biotech. For example, gene editing/genetic engineering (round-up ready (glyphosate resistant) plants, Golden (Vit. A) rice, Tomatoes with genes edited by CRISPR technology. BTEC 1008 Microbial Biotechnology is now called Fermentation Biotechnology to better reflect its content and fermentation aspects have been further highlighted. For example, the module overview states: *This module aims to provide students with a comprehensive understanding of the microbiological aspects of fermentative processes* *This module will introduce students to the concepts of fermentation with emphasis on biotechnological products.* *The module will outline the role of starter cultures and fermentation organisms. The module will also introduce students to the role of molecular genetics in enhancing the metabolic capabilities of fermentation microorganisms* Marine aspects have been added explicitly to BIOE 1001 Biorefinery and Bio-based Products both in terms of a module LO (LO6 Evaluate the potential of marine biomass as a valuable resource for bio-based products) and assessment component (Case Study on marine biomass). Marine aspects have also been highlighted in BTEC 1009 Introduction to the Biotechnology Sector – for example LO2 states Display knowledge of the different fields of biotechnology such as Health, Food, Marine, Agriculture, Bioprocess, and others. Also the BTEC 1009 Introduction to the Biotechnology Sector indicative syllabus captures - *Blue biotechnology applications for marine sector to study marine organisms (algae, bivalves, mesopelagic fish) for natural goods (Proteins, enzymes, biopolymers, bio-adhesives, and biomaterials) marine ecosystem, biofilms, bioremediation, marine ecology and bio-oceanography and other marine products.*
5.	Consideration should be given to the consolidation of some of the Stage 1 modules under subject titles for Physics and Chemistry, instead of having multiple modules for these.
	Response: From a prospective student viewpoint this recommendation can be addressed when promoting and marketing the programme e.g. by listing *chemistry* rather than physical chemistry, organic chemistry and inorganic chemistry etc.

	If appropriate, as part of the role out of the UEM and module alignment process further consideration will be given to the consolidation of Stage 1 modules were appropriate.
6.	Consideration of the renaming of some modules to better align the module name with the module content. In renaming of modules, to avoid names that are too similar to those being used for modules elsewhere in the Faculty of Sciences & Health, particularly the Schools of Biological, Health & Sports Sciences and Chemical & Biopharmaceutical Sciences.
	Response: The following modules have been renamed to better align to the module content: • TECH 1004 *Clean Room Technology* is now called TECH 1004 Microbial & Clean Room Technology • BTEC 1008 Microbial Biotechnology is now called BTEC 1008 Fermentation Biotechnology These have been checked against other modules in the Faculty and are not too similar. In cases where introductory modules are similar in title and learning outcomes to other modules in the Faculty, these will be streamlined as part of the current UEM processes.
7.	Consideration of the content of some of the modules relative to the ECTS credits, taking precautions not to subject the students to excessive workload expectations for some modules, ensuring a fair distribution of workload across all modules of a similar credit allocation.
	Response: Contact & learning hours are standardized across the entire curriculum and intended total learning hours are appropriate for ECTs. The school through annual monitoring evaluates the workloads and makes amendments to modules as necessary and this process will also be applied to the roll out of this programme taking into account student and programme team feedback.
8.	Assessments of some modules with significant practical components should be reviewed to identify opportunities for these to be CA-only modules. For example, the modules: • *(Code pending) Clean Room Technology* • *(Code pending) Environmental Sustainability & Bioeconomy*
	Response: TECH 1004 *Clean Room Technology* is now called TECH 1004 Microbial & Clean Room Technology and has been revised to remove the examination and it is now 100% CA

	BIOE 1002 *Environmental Sustainability & Bioeconomy* has been revised to remove the examination and it is now 100% CA
9.	Assessment criteria for some modules should be streamlined and simplified to facilitate use by both students and staff of the programme.
	Response: The 4th year project rubric is used across all School L8 programmes in the School of Food Science and Environmental Health. This supports the fair grading of projects in the School. The feedback from the validation panel will be brought to the School's TLA committee who developed the rubric and monitor its implementation.
10.	The reading lists of all programme modules should be reviewed and, where necessary, revised, to ensure that essential and supplementary reading materials for all modules are up-to-date.
	Response: Module reading lists are reviewed on an ongoing basis and new module versions will be created where reading lists are identified as requiring an update. Orders will be processed through the library for new books, where needed.
11.	Students should be informed – via inclusion in the Student Handbook - of the possibility of occasional multi-campus delivery of some practical components of the programme.
	Response: The delivery of the BIOP H3000 (Bio)Pharmaceutical processing pilot plant module in the Tallaght Campus has been listed in *Table 1 Programme structure and information including the name of relevant lecturer* in the student handbook.
12.	The names and contact hour classification for all modules should be the same for all programme-related documentation (as there are currently a few inconsistencies between the validation report tables of module information and the module information in the programme module catalogue (PMC)).
	Response: Discrepancies in module titles and lecture/lab/self-directed hrs between the programme documents have been fixed as needed.
13.	The programme team should align any module changes made in response to the recommendations above with the Principles of the TU Dublin's University Education Model (UEM) principles, in keeping with the application of these principles elsewhere in the development of the programme.

	Response: All module changes that have been made as a result of the validation report have been aligned with relevant principles of the UEM, in keeping with the application of these during the development of the programme. The School is working with the UEM team and the faculty task force to implement the UEM. All teaching and learning related decisions are routinely taken into consideration of the UEM including the development of this programme. As the UEM rollout develops further within the University and Faculty the School will keep this under review.
Stage-Specific Recommendations	
Stage 1:	
14.	*TFMB1001 Intro to Microbiology* LO2 Resource – query whether "Research" is the intended word.
	Response: The word "Research" in LO2 has been removed for TFMB1001.
Stage 2:	
15.	The number of modules with an examination component in this stage should be reviewed with a view to establishing consistency with the number of modules with a formal exam in Stages 1/3/4.
	Response: The School's teaching and learning committee will lead on this review. Staff members of the authentic assessment working group will work with the programme team to identify suitable opportunities that will also ensure assessment integrity concerns. As per section 8, 19 and 20 – some modules have now moved to 100% CA
16.	Recommend change of *(code pending) Microbial Biotechnology* to "Microbial Biotechnology 1".
	Response: This module has been renamed to BTEC 1008 *Fermentation Biotechnology.* The programme team believe this also address the validation panel's point raised in Point 6 above in relation to names being better reflective of module content.
17.	Recommend change of *(code pending) Clean Room Technology* to "Microbial Biotechnology 2".
	Response: This module has been renamed to TECH 1004 Mi*crobial & Clean Room Technology.*

	The programme team believe this also addresses the validation panel's point raised in Point 6 above in relation to names being better reflective of module content.
18.	*FOOD 4004* Lean and Six Sigma The panel queries whether an entire module should be dedicated this topic. It is recommended that consideration be given to only including a brief introduction to this in one of the other programme modules.
	Response: Through the Pharmaceutical Healthcare Industry Advisory Committee who were engaged during a programme review, the view expressed by the industry stakeholders was that if graduates were educated to the equivalent of green-belt status, as part of their degree, that this would be a highly valued graduate attribute to have. The *FOOD 4004* Lean and Six Sigma provides that training. This is a common module among many Biotechnology degrees, including for example module MM354 Lean and 6 Sigma Manufacturing in DCU. The programme team feels very strongly that Lean operations is an important skill set for these 'industry ready' students to graduate with. We will keep under review the currency of the module learning outcomes.
Stage 4:	
19.	Consideration should be given to assessing these modules on a 100% CA basis: • *(Code pending) Agrifood & Beverage Biotech* • *(Code pending) Biorefinery & Bio-based Products*
	Response: Both modules have been updated in Akari to be 100% CA.
20.	*(Code pending) Omics for Biotechnology* This module currently has a 60% exam/40% CA weighting. The panel recommends revision of this assessment weighting to reflect practical-intensive nature of this module.
	Response: The *BTEC1010 Omics for Biotechnology* module descriptor has been amended to 35% Report & 15% MCQ (assessing module LOs 1 and 3); 25% presentation (assessing module LO 2); 25% critique of a recent omics publication (assessing module LO 2).
21.	*FOOD 4005* has different names in the schedule of modules (where it is called *Advanced Analytical and Emerging Technologies*), when compared to the module descriptor (where it is called *Advanced Analysis Techniques for Food, Beverage and Biopharma*). These should be aligned to ensure consistent use of the module name throughout all documentation.

	Response: The schedule of modules in the validation documentation has been corrected to reflect the correct title of *Advanced Analysis Techniques for Food, Beverage and Biopharma*.
22.	*FOOD 4005* is deemed by the panel as having content and assessments more appropriate to Level-9 study. Reconsideration of inclusion of this module in the programme is recommended.
	Response: This module has been successfully running for a number of years as a final year advanced topic for an honours degree programme. The reality of the delivery of this content vs the module descriptor may not be completely aligned, and this will be kept under review.
23.	*(Code pending) Industrial Biotechnology Placement* Although the programme documentation does not make provision for it, the programme team verbally indicated that students are at times – without having recourse to exceptional circumstances provisions – facilitated in extending this module into the summer holiday period, without further benefit in terms of programme/module credit and assessment. The panel recommends the following: • Should this practice be continued, that it be supported only if it is confirmed for the students (in the Work Placement and Student Handbooks) that they have TU Dublin insurance cover for this extended period. • That this practice be reconsidered, with the recommendation that any arrangement between a student and their work placement employer/supervisor be extended beyond the timeline of this module only in a private capacity, without this being supported by TU Dublin as an extension of this module. This is to ensure that a student can have their placement module marks considered in the Summer (not Supplemental) module and progression exam boards.
	Response: As confirmed with TU Dublin Insurance office TU Dublin students can extend the period of their placement beyond what is required for their module/programme and are covered by TU Dublin insurance while they are still a registered TU Dublin student. A sentence to this effect has been added to the work placement handbook. Nonetheless, all requirements for the assessment of the module must be completed by the student during the normal timeframe of the placement, irrespective if they decide to extend the placement.

Other matters to be brought to the attention of Faculty Board and/or University Programmes Board
N/A

Section G - Approvals

Validation Report	
This report has been agreed by the Validation Panel and is signed on their behalf by the chairperson.	
Chairperson: Dr. Aidan Meade	
Signed:	Date: Click or tap to enter a date. 11/5/2023

School Response	
The response to the conditions and recommendations has been agreed by the School and is signed by the Head of School.	
Head of School: Julie Dunne	
Signed:	Date: 6/6/2023Click or tap to enter a date.

Faculty Board	
The report and response have been approved by Faculty Board	
Vice-Dean for Education: AIDAN MEADE	
Signed:	Date: Click or tap to enter a date. 8/9/2023

University Programmes Board (Programmes of 30 ECTS or great)	
The report and response have been approved by the University Programmes Board	
Registrar:	
Signed:	Date: 3

BSc(Hons) Industrial Biotechnology Validation Event Schedule 9th May 2023 Central Quad (Room CQ414F), Grangegorman Campus, Technological University – Dublin, Dublin, D07 ADY7		
Time	**Description**	**In attendance**
09:30-10:15	Panel refreshments & preliminary meeting	Panel only
10:15-11:15	Presentation and meeting with programme leadership team *(Discussion of incl. rationale, market demand, programme design, aims, learning outcomes, entry requirements, student numbers, resources, regulatory, policy matters)*	Dean (or nominee) Head of School Head of Discipline Programme Co-ordinator
11:15-11:30	Break - Refreshments	Panel only
11:30-13:30	Module-by-module analysis *(Discussion of incl. modules and syllabus, teaching and learning methods and assessment)*	Head of School Head of Discipline Programme Co-ordinator Staff responsible for delivery & assessment of modules
13:30-14:00	Lunch	Panel only
14:00-14:45	Tour of facilities	Programme Co-ordinator Staff as nominated by the programme chair
14:45-15:45	Panel discussion (incl. refreshments)	Panel only
15:45-16:15	Feedback to school: Oral presentation of summary of findings	Head of School Head of Discipline Programme Co-ordinator Other key staff

Panel Members:

Dr Aidan Meade (Head of Learning Development, Faculty of Sciences & Health, TU Dublin) *CHAIR*

Prof Ibrahim Banat (Professor of Microbial Biotechnology, School of Biomedical Sciences, Ulster University)

Dr Adrienne Fleming (Senior Lecturer, School of Chemical & Biopharmaceutical Sciences, TU Dublin)

Prof Orla Howe (Senior Lecturer, School of Biological, Health & Sports Science, TU Dublin)

Dr Linda Moore (Academic Quality Advisor, Academic Affairs representative, TU Dublin)