# SOUTH EAST TECHNOLOGICAL UNIVERSITY

## *COURSE EVALUATION 2*

## ASSESSORS' REPORT TO ACADEMIC COUNCIL

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| **COURSE EVALUATED**: | Higher Diploma in Science in Data Analytics |
| **SCHOOL:** | Science and Computing |
| **DEPARTMENT:** | Computing and Mathematics |

## 1. INTRODUCTION

The following is a review report to Academic Council from the panel of assessors on the proposal from the School of Science and Computing at South East Technological University Waterford to develop a Higher Diploma in Science in Data Analytics (Level 8; 60 Credits). In accordance with the regulations governing the evaluation of new programme proposals, as set out in the South East Technological University Waterford *Programme Quality Assurance Enhancement Policy and Procedures*, the programme proposal was reviewed by a panel of assessors.

The panel of assessors who contributed to this report were:

- Ciaran Lynch, Former Development Manager. Limerick Institute of Technology (Chair)
- Dr David Goulding**,** Head of Department of Mathematics, Munster Technological University
- Rob Leslie**,** Founder & CEO, Sedicii Innovations Limited, ArcLabs Research & Innovation Centre
- Prof David Malone, Lecturer, Department of Mathematics & Statistics, Maynooth University
- Dr Colette Moloney, Assistant Registrar, South East Technological University
- Dr Helen Murphy, Academic Council Representative, South East Technological University
- Tadgh O'Callaghan, Student Representative, Mary Immaculate College, Limerick
- Donna Tilson**,** Director Data Engineering, Sun Life, Waterford

In accordance with the regulations set out in the aforementioned *Programme Quality Assurance Enhancement Policy and Procedures*, a review meeting took place on 20 June 2022. The review meeting was conducted virtually via Teams. In the course of the meeting, the panel of assessors met with the programme development team. The following members of the South East Technological University team were present:

- Prof Peter McLoughlin, Head of School of Science and Computing
- Ruth Barry, Lecturer, Department of Computing and Mathematics
- Dr Rosanne Birney, Lecturer, Department of Computing and Mathematics
- Dr Bernard Butler, Lecturer, Department of Computing and Mathematics

- Dr Peter Carew, Lecturer, Department of Computing and Mathematics
- Eamonn DeLeastar, Lecturer, Department of Computing and Mathematics
- Dr Nikos Georgiou, Lecturer, Department of Computing and Mathematics
- Dr Aoife Hennessy, Lecturer, Department of Computing and Mathematics
- Dr Padraig Kirwan, Lecturer, Department of Computing and Mathematics
- Mary Lyng, Lecturer, Department of Computing and Mathematics
- Dr Tony Lyons, Lecturer, Department of Computing and Mathematics
- Dr TJ McDonald, Lecturer, Department of Computing and Mathematics
- Laura McGibney, Online Academic Advisor, School of Education and Lifelong Learning
- Dr Kieran Murphy, Lecturer, Department of Computing and Mathematics

The assessors wish to thank the members of the development team for engaging generously and openly with the review process.

## 2. SUMMARY RECOMMENDATIONS AND CONDITIONS

### *2.1 General Remarks*

The panel commends the School on their industry engagement and on developing a programme to meet an identified sectoral need. The panel **recommends approval of the Higher Diploma in Science in Data Analytics** until the next School Review in the School of Science and Computing. **Approval is conditional on the submission of a revised programme document that takes account of the conditions and recommendations outlined below, and the successful review of the revised document by the panel; and the submission of a summary document describing the responses and actions of the School to address the conditions and recommendations made by the review panel.**

Areas for attention have been emboldened in the text for convenience of reference. Action is required on items marked ‘Conditions’ and such action is mandatory if the programme is to be approved; action is highly recommended on items marked ‘Recommendations’.

### *2.2 Conditions*

- **The programme learning outcomes should be mapped to the SETU Award Standards for the discipline at Level 8 to ensure that the award is at the requisite standard. The module descriptors and programme schedules should be reviewed for consistency,**

**particularly in the areas of contact hours and assessment type.** Under SETU Waterford academic regulations, 60 credits of advanced modules must contribute to a Major Award at Level 8; **the intermediate module, 'NoSQL Databases' should therefore be replaced by a similar module at advanced level which may consist of a reworking of the existing module.**

- **The School should revise the Programme Assessment Strategy and the 'primary purpose' statement to better reflect the breath of assessment types proposed. The opportunities for the development and assessment of transversal skills should also be highlighted. The module descriptors should be reviewed to ensure that the types of assessment proposed are appropriate to measure the associated module learning outcomes and that a breakdown of the continuous assessment proposed is included. The revised document should also include a sample assessment schedule.**

- **The following are the conditions for individual modules:**

| Module Title | Condition |
|---|---|
| Computer Security | **The indicative content and module learning outcomes should be revised to change the focus of the module from networks to data, including an introduction to privacy preserving techniques, and reference DLTs/blockchains and their use in securing data.** |
| Data Analytics Work Placement/Industry-Led Project | **The School should consider if a project only option would be preferable. If the decision is to continue to propose both work placement and project options, then separate module descriptors should be provided for each. The project module would be better titled 'Data Analytics Project' which would allow scope to include industry-based, industry-led and research projects. Greater detail should be included on the nature of the project expected and a breakdown of the proposed assessment of same should be** |

| Module Title | Condition |
|---|---|
| | **provided. If the work placement module is proposed then the descriptor should detail the organisation, structure and assessment of same e.g. role of work-based mentor *et cetera.*** |
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*2.3 Recommendations*

- **The School should consider how the content delivery on the programme could be re sequenced or organised to ensure that the learners have developed sufficient skills to undertake the capstone project prior to commencing the 'Data Analytics Work Placement/Industry-Led Project' module.**

- **The School should consider the inclusion of 'interpretation' and/or 'communication' within the 'Aim(s) of the Programme' in the programme document to reflect the broader nature of the programme and the role of data analysts.**

- **The 'Data Ethics' module should be delivered as early as possible in the programme so that learners have a knowledge of the legal aspects and responsibilities of storing and utilising data from the outset. The areas of data governance, and residency should be included in the indicative content and learning outcomes for the module. The programme learning outcomes and content should be revised to reflect the legal and governance aspects.**

- **The number of module learning outcomes proposed in modules and the credits attached should be reviewed to ensure consistency between modules, and alignment to School policy.**

- **The module descriptors should avoid references to specific computer languages or software, where possible, to allow flexibility for learners to utilise the packages or languages most appropriate at the time.**

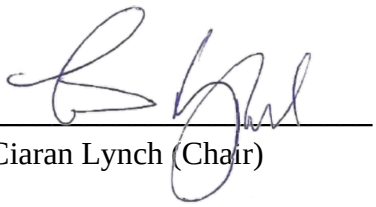
- **The reading lists should be reviewed to ensure that all core elements of the modules are addressed, that they are up-to-date, use the most recent editions, and include the most relevant current publications and online resources.**

- **The School should consider the use of online resources to both help students starting the programme and to supplement their learning, in particular in relation to the programming components of modules.**

- **The document should be updated to reference SETU, rather than exclusively referring to WIT.**

- **The following are recommendations on individual modules:**

| Module Title | Recommendation |
|---|---|
| Business Intelligence Visualisation | In discussion with the panel, the team mentioned that 'data storytelling' was an aspect of the module. **The module descriptor should be revised to include 'story telling' in the indicative content.** |
| Data Analytics 1 | **Change 'preform' to 'perform' in module learning outcome 1.** |
| Data Ethics | **'Data residency' should be included in the indicative content.** |
| Data Analytics 2 | **The reference to 'semester two' should be removed from the text in the Learning and Teaching Methods section of the module descriptor and the statement 'apply techniques' should be expanded. The Assessment Methods section should be reviewed to ensure that the outcomes assessed are correctly indicated.** |
| Building Data Science Models | **Indicative Content should be expanded to provide a clearer indication of the material covered in the module.** |

**Signed:** 

Ciaran Lynch (Chair)

**Date:** 29/06/2022