SOUTH EAST TECHNOLOGICAL UNIVERSITY

COURSE EVALUATION 2

ASSESSORS' REPORT TO ACADEMIC COUNCIL

COURSE EVALUATED:	Certificate in Computer Science (Minor Award, Level 8, 30 credits *linked to* Higher Diploma in Science in Computer Science) Certificate in Software Engineering (Minor Award, Level 8, 30 credits *linked to* Higher Diploma in Science in Computer Science) Certificate in Cybersecurity and Forensics (Minor Award, Level 8, 30 credits *linked to* Higher Diploma in Science in Computer Science) Certificate in Artificial Intelligence and Machine Learning Engineering (Minor Award, Level 8, 30 credits *linked to* Higher Diploma in Science in Computer Science)
FACULTY:	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 Faculty of Science and Computing at South East Technological University to develop four Level 8, 30 credit, Minor Awards *linked to* the Higher Diploma in Science in Computer Science: Certificate in Computer Science; Certificate in Software Engineering; Certificate in Cybersecurity and Forensics; Certificate in Artificial Intelligence and Machine Learning Engineering. In accordance with the regulations governing the evaluation of new programme proposals, as set out in the South East Technological University *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 Enda Fallon, Head of Department of Computer and Software Engineering, Technological University of the Shannon
- Joseph Kellegher, Head of Discipline, Electrical Services Engineering, Technological University Dublin
- Brendan O'Farrell, Programme Manager, General Engineering Talent Development, Red Hat, Waterford
- Dr Colette Moloney, Assistant Registrar, South East Technological University
- Vincent Ryan, Senior Lecturer, Department of Computer Science, Munster Technological University
- Siobhan Wall, Academic Council Representative, South East Technological University

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 2025. 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:

- Dr Alan Davy, Head of Department of Computing and Mathematics, South East Technological University

- Dr Rosanne Birney, Lecturer, Department of Computing and Mathematics, South East Technological University
- Dr Bernard Butler, Lecturer, Department of Computing and Mathematics, South East Technological University
- Eamonn Deleastar, Lecturer, Department of Computing and Mathematics, South East Technological University
- David Drohan, Lecturer, Department of Computing and Mathematics, South East Technological University
- Jerry Horgan, Lecturer, Department of Computing and Mathematics, South East Technological University
- Mary Lyng, Lecturer, Department of Computing and Mathematics, South East Technological University
- Jimmy McGibney, Lecturer, Department of Computing and Mathematics, South East Technological University
- Laura McGibney, Online Engagement Advisor, Department of Computing and Mathematics, South East Technological University
- Mairead Meagher, Lecturer, Department of Computing and Mathematics, South East Technological University
- John Rellis, Lecturer, Department of Computing and Mathematics, South East Technological University
- Siobhan Roche, Lecturer, Department of Computing and Mathematics, South East Technological University
- Frank Walsh, Lecturer, Department of Computing and Mathematics, South East Technological University
- Peter Windle, Lecturer, Department of Computing and Mathematics, South East Technological University

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 team on their wealth of knowledge and expertise in delivering programmes in the area, and their innovative online engagement support structure for learners. The panel **recommends approval of four Level 8, 30-credit, Minor Awards *linked to* the Higher Diploma in Science in Computer Science: Certificate in Computer Science; Certificate in Software Engineering; Certificate in Cybersecurity and Forensics; Certificate in Artificial Intelligence and Machine Learning Engineering** until the next Review in the Faculty 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 submission of a summary document describing the responses and actions of the Faculty 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 entry requirements proposed for the Certificate in Software Engineering, Certificate in Cybersecurity and Forensics, and Certificate in Artificial Intelligence and Machine Learning Engineering should be reviewed for clarity, particularly re the Level 8 entry pathway.** There was some ambiguity re the utilisation of an interview as part of the admission process; there is no mention of an interview in the proposed entry requirements but an interview was referenced in the entry process discussed with the panel. **The team should review the entry requirements and process for all four certificates and clarify if an interview is being proposed as part of the process, and, if yes, articulate the function of the interview i.e. an entry requirement that applicants must successfully complete for entry, a shortlist process in the event the programme is over subscribed, or purely to advise applicants on the nature of the programme. If an interview is proposed as part of the entry requirements then the function and any associated grading criteria should be explicit in the programme proposal.**

- **The programme learning outcomes proposed for the certificates should be revised to better reflect the nature and content of the individual certificates and should be expressed as outcomes achievable on completion of the programme, and in language appropriate to the knowledge type. The revised programme learning outcomes should be mapped to the Award Standards for Level 8, but given that the certificates are Minor, rather than Major Awards, the certificate outcomes may only achieve a subset of the Award Standards.**

- **The level of 'The Evolution of Machine Learning and Artificial Intelligence' module should be reconsidered;** the module is currently given as 'Intermediate' whereas all other modules, including all modules on the other certificates, are proposed at 'Advanced' level. **The new modules should be entered on the SETU module catalogue once access to same is restored.**

2.3 Recommendations

- **The reading lists should be reviewed to ensure that all contain up-to-date resources and the latest editions of same.**

- Given that Machine Learning is a topic within the area of Artificial Intelligence, **the team should consider if 'Certificate in Artificial Intelligence' would be a more appropriate title for the proposed Certificate in Artificial Intelligence and Machine Learning Engineering.**

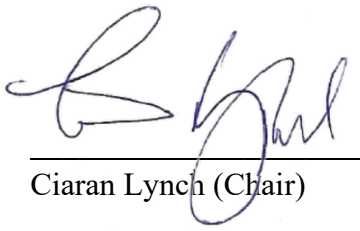
- **The team should consider modelling the structure of any future elective streams/Minor Awards on the current Artificial Intelligence stream i.e. 20 credits of taught modules which prepares for a 10-credit mini-project module in the area. The project would be an addition to a graduate's portfolio and provide experience in ethics *et cetera*. The Certificate in Software Engineering and Certificate in Cybersecurity and Forensics could be amended to include a 10-credit project module at the next opportunity to review.**

- **The team should review the module descriptor for 'The Evolution of Machine Learning and Artificial Intelligence' to better articulate where the practical elements**

are incorporated into the module, and also to identify additional opportunities for practice in the module.

- **The module learning outcomes and indicative content should be reviewed in new modules now, and at the next opportunity to review for existing modules, to articulate where the areas of DevOps and security are covered in the programme. Given that the certificates are standalone Minor Awards, the topics of DevOps and security should be at least addressed in each at a basic level.**

- **The team should consider how the use of Generative AI could be incorporated into the programmes and how the assessments could be designed to discourage the inappropriate use of same.** In discussion with the panel, the team mentioned elements of practice in individual modules (e.g. interview *et cetera*) to ensure that the assignments are a learner's own work, but these were not captured in the document or consistent across modules. **The team should consider using in-person practical assessments in the programme to assure the assessment process.**

Signed: 

Ciaran Lynch (Chair)

Date: 09/07/2025