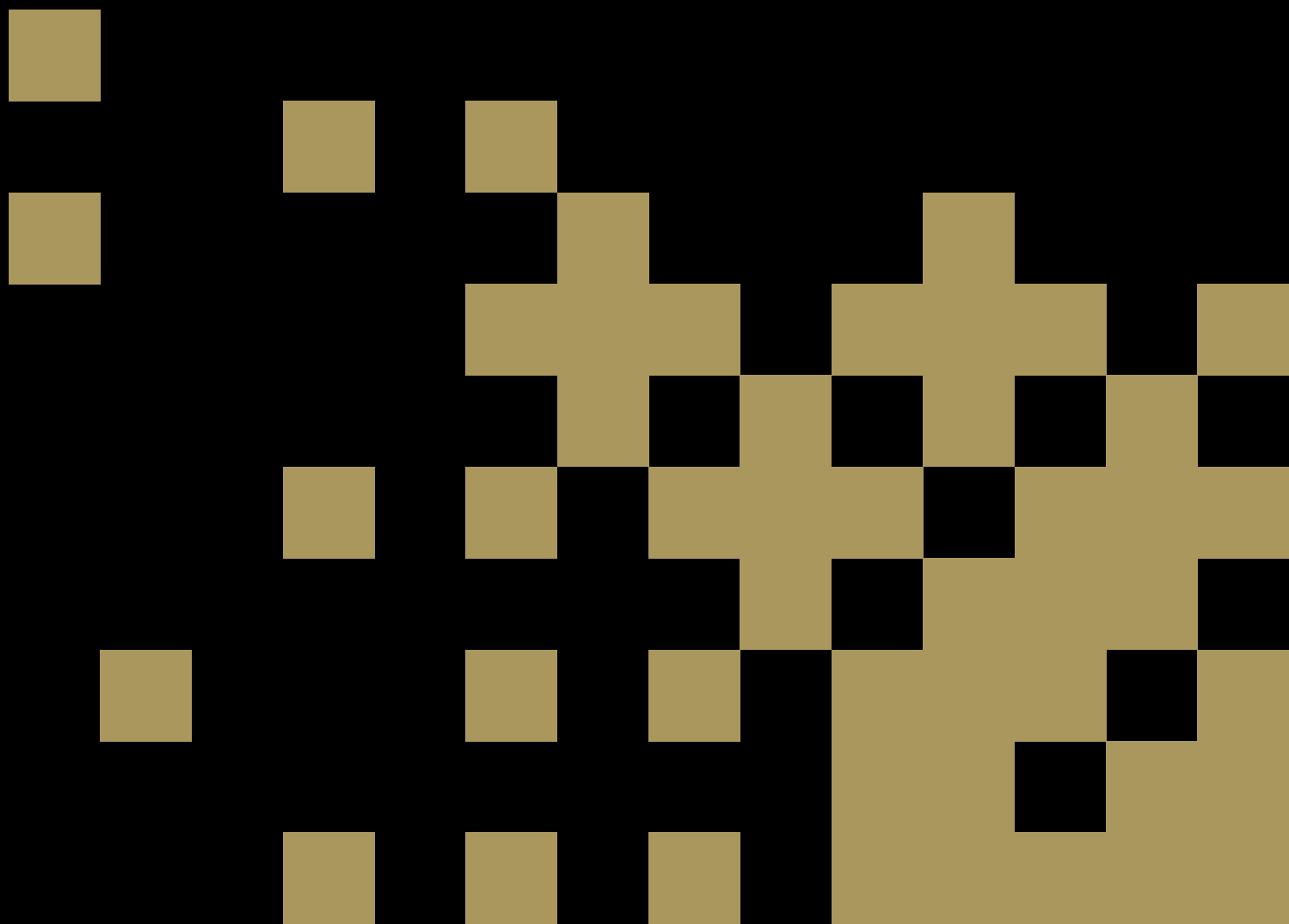
TUS

Technological University of the Shannon: Midlands Midwest

Ollscoil Teicneolaíochta na Sionainne: Lár Tíre Iarthar Láir

TUS Programme Design Guidelines



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1.0 Purpose of the Guide

The purpose of this TUS Programme Design Guidelines document is to complement the formal TUS policies and procedures relating to programme validation and programme re-validation (Programmatic Review) by outlining key considerations and recognised good practices that support high-quality programme design. While the policies and procedures define mandatory requirements and governance frameworks, these Guidelines provide additional pedagogical context and practical advice across key stages of programme development.

The document is intended to guide programme teams in applying effective design principles, exercising informed judgement, and promoting consistency and quality across programmes. It encourages reflective and evidence-informed practice while facilitating appropriate flexibility to respond to disciplinary and contextual differences. The Guidelines also support the practical application of curriculum design principles as programme teams progress through the key stages of programme development, from initial programme concept and rationale through to curriculum design, programme structure, module sequencing, teaching and learning approaches, and assessment strategy development.

The Guidelines place strong emphasis on programme-level coherence and the development of a shared educational philosophy among programme teams. Programme design is presented as the intentional development of an integrated and coherent student learning journey from entry to graduation, where modules are purposefully connected to support progressive learning and the achievement of programme level outcomes. Programme teams are encouraged to collaborate in defining programme aims, graduate attributes, programme learning outcomes, and coherent approaches to curriculum design, teaching, learning and assessment.

A central theme throughout the guidelines is alignment between programme learning outcomes, TUS award standards, NFQ level indicators, curriculum structure, module design, teaching and learning strategies and assessment practices. The Guidelines also emphasise evidence-informed programme development, stakeholder engagement, work-integrated learning, inclusive curriculum design, authentic assessment, academic integrity, Education for Sustainable Development (ESD), digital capability, and the responsible integration of generative AI, *inter alia*.

2.0 Scope of the Guide

The Guidelines may be utilised to support the design of all taught programmes during new programme development and validation, and programme re-validation during programmatic review, including:

- Both undergraduate and postgraduate taught programmes leading to Major and Non-major awards at Level 6 to Level 9 on the NFQ;
- TUS Certificates of Completion for Programmes of 1 – 9 ECTS credit volume range.
- The development of taught components of the TUS postgraduate research programme portfolio at Level 9 and Level 10 on the NFQ.

The Guidelines are intended as a supportive resource to assist programme teams in informed and reflective programme design and review, recognising the diversity of disciplinary and pedagogical contexts across TUS. The Guidelines should be read in conjunction with the wider Academic Quality Assurance and Enhancement Handbook,[1] including, but not limited to:

1. TUS Policy for Taught Programme Validation and Modification[2]
2. TUS Procedures for Taught Programme Validation and Modification[3]
3. TUS Policy Programmatic Review[4]
4. TUS Procedures for Programmatic Review[5]
5. Putting Learning first: TUS Learning, Teaching and Assessment Strategy[6]
6. TUS Graduate Attributes Framework[7]
7. TUS Guide to Writing and Using Learning Outcomes[8]
8. TUS Policy and Procedures for Collaborative Provision (National and Transnational)[9]
9. TUS Policy for Participation in the European Approach for the Quality Assurance of Joint Programmes[10]
10. TUS Student Placement Policy[11]
11. TUS Academic Regulations for Taught Programmes[12]

These Guidelines do not explicitly address specific design considerations for Blended and Online Learning programmes and a separate *TUS Policy for Blended and Online Learning* is in development in this regard. A list of relevant definitions is available here.

3.0 Navigating the Guidelines

The structure of the Guidelines broadly aligns with the principal areas of the Academic Module Manager (AMM) system, ensuring that the guidance reflects the practical stages involved in developing a programme and building programme and module documentation within the system. Accordingly, the content is organised into two principal sections that focus at Programme and Module levels, respectively.

- Section 4 focuses on programme-level design considerations, including programme philosophy, rationale and demand, admissions and progression arrangements, curriculum structure, programme teaching and learning strategies, assessment strategies and quality enhancement frameworks.
- Section 5 addresses module-level design considerations, including module learning outcomes, teaching and learning strategies, inclusive practice, active and applied learning, digital technologies, ESD, assessment design, academic integrity and developing appropriate reading lists.

Programme teams are encouraged to use the guidance, frameworks and appendices to support collaborative discussion, reflective curriculum review and evidence-informed decision-making during programme development, validation/re-validation. The Guidelines are intended to function as a practical reference resource that programme teams can return to as needed, allowing readers to engage with the sections most relevant to their particular stage of the programme development and review cycle.

To further support implementation, the Guidelines will be accompanied by a series of dedicated workshops and enhancement activities delivered through the Centre for Pedagogical Development and Innovation (CPID). These workshops will focus on specific thematic aspects of programme and curriculum design and will provide practical support for Departments and Programme Boards engaged in programme validation and re-validation processes.

Programme-Level Design Considerations

4.0 Programme-Level Design Considerations

The National Strategy for Higher Education to 2030[13] highlights the important role of higher education in supporting the development of Irish society and a knowledge-based economy. In this context, the quality and relevance of undergraduate and postgraduate programmes are central. In addition to core disciplinary and interdisciplinary knowledge, skills and competencies, TUS places strong emphasis on the development of key graduate attributes, including transferable and professional capabilities such as critical thinking, problem solving, creativity, teamwork and effective communication. Through this approach, programmes aim to support students in reaching their full potential as graduates who are capable of contributing meaningfully to their professions, their communities and to the wider economy.

4.1 Developing a Collective Team Philosophy

A key starting point in programme design is the development of a shared educational philosophy among the programme team. This involves establishing a collective understanding of the purpose of the programme, the knowledge and capabilities it seeks to develop, and the intended learning experience and outcomes for students.

Establishing this shared perspective supports programme teams in designing coherent curricula at programme level, rather than as a collection of individually developed modules. It also strengthens alignment between programme learning outcomes, curriculum structure, teaching approaches and assessment strategies, while enabling programme teams to intentionally shape the student learning journey from entry through progression to graduation.

In practice, this involves programme teams working collaboratively to consider the following key programme-level design considerations:

- Ensuring sufficient time to create the space for programme teams to develop a shared understanding of the rapidly evolving higher education landscape, engage in collective reflection on emerging challenges, and work collaboratively towards a coherent, holistic programme design;
- Identifying the graduate attributes, professional capabilities and disciplinary expertise the programme seeks to develop, and translating these into clearly articulated programme learning outcomes;
- Using the programme learning outcomes to inform the overall curriculum design, including the identification of core knowledge areas, programme structure and the learning experiences provided to students;
- Ensuring that modules collectively support the achievement of programme learning outcomes and that knowledge, skills and competencies develop progressively across programme stages;
- Agreeing shared approaches to learning, teaching and assessment that support meaningful and authentic learning, while embedding opportunities for applied learning, employability development, digital capability and inclusive practice across the programme.

This collaborative process helps ensure coherence across the programme and supports programme teams in designing curricula that reflect a shared vision of the aim of the programme and the student learning journey.

4.2 Identifying the Rationale and Demand for the Programmes

A clear and well-evidenced rationale is an essential starting point in the design of any new programme. Programme teams should adopt an evidence-based approach to demonstrate that the proposed programme responds to an identifiable need and aligns with university priorities, disciplinary developments, and wider societal and/or economic demands. Establishing a robust rationale and evidenced demand

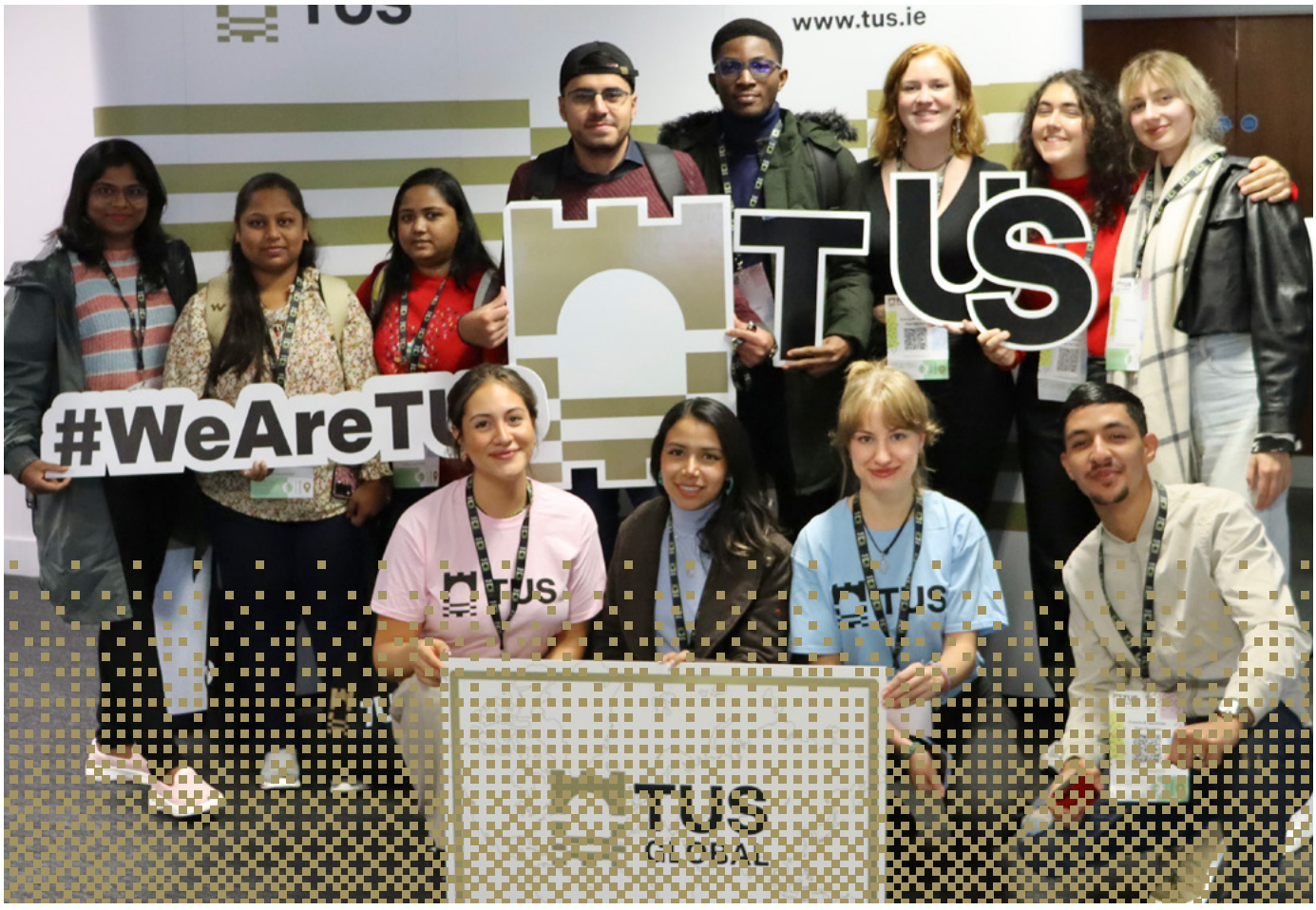
helps ensure that programmes are relevant, sustainable, and capable of providing meaningful learning opportunities while supporting graduate employability and career pathways. The development of the programme rationale typically involves consultation with both internal and external stakeholders.

Consultation with internal stakeholders is vital to ensuring that a proposed programme is academically robust, feasible to deliver and aligned with University priorities and supports. It can help programme teams consider alignment with existing provision, curriculum design, resource implications and student experience and support requirements. Engaging relevant colleagues and TUS professional services at an early stage can also help ensure that appropriate academic, pedagogical and professional supports and services are in place. Internal stakeholders may include, inter alia:

- Students
- Senior Management
- Deans of Faculty/Heads of Department
- Faculty/Department Colleagues
- Centre for Pedagogical Innovation and Development (CPID)
- Library
- Student Support Services
- Careers and Employability Service
- TUS Global
- TUS Corporate Services
- Campus Development/Estates

Consultation with TUS students, including current students and recent graduates where appropriate, can provide invaluable insight into the student learning experience, programme expectations and emerging areas of interest, helping to inform decisions relating to programme demand, curriculum content, delivery approaches, student supports and overall programme design.

Consultation with external stakeholders is vital in establishing the rationale and demand for a proposed programme. Programme teams should gather evidence from a range of sources to ensure that the programme responds to identifiable academic, professional and societal needs. Engagement with relevant stakeholders, alongside consideration of sectoral and labour market information, can help confirm programme relevance, identify potential graduate opportunities,



and inform decisions relating to programme structure, content and delivery. Where programmes include work placement or practice-based learning, programme teams should also consider the capacity of the relevant sector to support these elements, including the scale, timing and sustainability of such provision. Typical consultation and evidence gathering approached are listed in Table 1.

The programme rationale should then be articulated clearly and concisely, supported by evidence gathered through these processes. A concise, evidence-informed rationale provides a clear justification for the development of the programme and supports the programme approval and validation/re-validation process. Typically, the rationale should:

- Explain the purpose and distinctiveness of the programme, identifying the academic, professional or societal needs it seeks to address;
- Define the intended student cohort and entry profile, including the learners the programme is designed to attract and support;
- Outline the anticipated graduate outcomes, including how the programme supports employability, professional development and progression opportunities.

The TUS Guidelines for Conducting Focus Groups for Quality Assurance Processes[14] are available as a useful resource to support consultation activities.

Table 1. Typical consultation and evidence gathering approaches during programme development

Typical consultation and evidence gathering activities
• Conducting surveys with employers, graduates/alumni and prospective students. • Conducting meetings, consultations and/or Focus Groups with graduates/alumni and current students. • Conducting meetings, consultations and/or Focus Groups with industry partners or advisory groups. • Engagement with professional bodies. • Review of labour market analysis and sectoral/skills reports and relevant demographic data. • Benchmarking against comparable national or international programmes. • Conducting programme design workshops or structured discussions within the programme team.

4.3 Specifying the Admissions Transfer and Progression Criteria

Clear and consistent specification of Admissions, Transfer and Progression arrangements in programme documentation is essential to provide explicit and accessible information for prospective and current students and other stakeholders, enabling informed decision-making and a clear understanding of entry routes, progression pathways and award outcomes. To support consistency across programme documents, the information associated with Admissions, Transfer and Progression is structured in Academic Module Manager under the following headings:

1. Entry Requirements and Access Routes;
2. Transfer Routes;
3. Programme Progression;
4. Embedded Programmes.

Guidance on the content to include under each heading is provided below supported by typical examples. The guidance is aligned with university policies and is intended to support clarity, consistency, and transparency in programme specifications.

4.3.1 Entry Requirements and Access Routes

Undergraduate Programmes

Generally, undergraduate programme minimum entry requirements should be listed for applicants presenting the following awards:

Leaving Certificate	*Example for Level 8:* Grade H5 in two higher-level papers and a grade O6/H6 in four ordinary/higher level papers in the following subjects: • English or Irish (not foundation level) • Mathematics (not foundation level) • Laboratory science subject • (Biology, Physics, Chemistry, Phys/Chem, or Agricultural Science) • Three other subjects. *Example for Level 7:* Grade O6 in five subjects, including: • English or Irish (not foundation level) • Mathematics (not foundation level) • Three other subjects
QQI Award	*Example for Level 8:* Any QQI level 5 qualification is acceptable with three distinctions. Applicants to this programme are required to have one specified mathematics module included in their award, mathematics (5N1833), or Maths for IT (5N18396) or Maths for STEM (5N0556) or alternatively have Leaving Certificate Mathematics at O6/H7. *Example for Level 7:* Any QQI level 5 qualification is acceptable. Applicants to this programme are required to have one specified mathematics module included in their award, mathematics (5N1833), or Maths for IT (5N18396) or Maths for STEM (5N0556) or alternatively have Leaving Certificate mathematics.
Other Requirements	Where any additional requirements exist for entry, they should be listed here e.g., Portfolio Presentation is required for all Applicants.
Mature Applicants	Where there are specific requirements for mature candidates, they should also be recorded here, e.g., Mature applicants to Nursing must satisfy current Nursing and Midwifery Board of Ireland (NMBI) requirements to undertake this programme.

Postgraduate Programmes

Postgraduate programme minimum entry requirements should include, where relevant, the minimum award classification at undergraduate level, including any specified subjects/disciplines.

Example for Level 9:

1. For a level 9 taught Masters programme, applicants should have a minimum of a Merit Higher Diploma (Level 8) or 2.2 Honours Bachelor's degree (Level 8) in a cognate area.
2. For a level 9 taught Postgraduate Diploma programme, applicants should have a minimum of a Pass Higher Diploma (Level 8) or a minimum of a Pass Bachelor's degree (Level 8) in a cognate area.

or

Those with a level 7 degree in any non-cognate discipline with three years post qualification experience assessed by an RPL process.

English Language Proficiency

English language proficiency requirements only need to be specified where they differ from those outlined in the TUS Admissions, Transfer and Progression Policy for Taught Programmes.[15]

RPL

Details of RPL should only be specified if they differ from the principles outlined in the TUS Policy on Recognition of Prior Learning.[16] and if their inclusion is considered necessary by the applicable Programme Board.

Garda Vetting Post Entry Requirement (Where Applicable)

Students registered on programmes that involve placement or activities with children and/or vulnerable persons are required to undergo and successfully complete Garda Vetting in accordance with the National Vetting Bureau Acts 2012 – 2016.[17]

Garda Vetting is a mandatory post-registration requirement for students on specified programmes and must be completed at the time directed by the University, in advance of participation in any programme-related activities involving children and/or vulnerable persons. Failure to obtain satisfactory clearance may result in a student being unable to participate in mandatory elements of the programme, which may impact progression or continuation on the programme.

Policy guidance is available at: TUS Student Garda Vetting Policy and Procedure.[18]

Further guidance on completing the Entry Requirement and Access Routes section of a programme specification on Academic Module Manager is available in Appendix 1.

4.3.2 Transfer Routes

Opportunities to transfer into and out of the programme should be outlined in this section of the programme specification. This can include whether transfer into a programme will be considered from other cognate programmes. Any restrictions arising from curriculum, accreditation or regulatory requirements should be stated. Advanced entry to ab-initio programmes can be described in this section, including established linkage with QQI Level 5/6 programmes of study.

Policy guidance is available in the TUS Admissions, Transfer and Progression Policy for Taught Programmes.[15]

4.3.3 Programme Progression

The possibilities for progression associated with the programme, including any relevant progression linkages, can be outlined in this section (for example, where add-on programmes, or other progression opportunities, are available at higher NFQ levels). In the case of common entry programmes, progression to the suite of associated ab-initio programmes can be described here.

If there is a required level of attainment for progression or other associated entry requirements, these should also be stated here (for example, a GPA of 60% is required to progress to the Level 8 add-on).

The Programme Board may also wish to briefly indicate how the programme supports progression to further study.

The specific requirements for Stage Progression and Award Progression are documented in the TUS Academic Regulations for Taught Programmes[12] and these do not need to be re-stated in programme documents.

4.3.4 Embedded Programmes

To support consistency, exit awards associated with embedded programmes should be presented in the following format within programme documentation (if necessary, specific modules required for each level of award can be listed).

Undergraduate Example	Where a student chooses to leave this programme of study, they may be eligible to receive one of the following awards: 1. After 2 years of study and having successfully completed 120 ECTS a student may apply to be awarded a Higher Certificate in [Award Stem] in [Specialisation]. 2. After 3 years and successful completion of 180 ECTS a student may apply to be awarded a Bachelor of [Award Stem] in [Specialisation].
Postgraduate Example	Where a student chooses to leave this programme of study, they may be eligible to receive one of the following awards: 1. Having successfully completed 30 ECTS a student may apply to be awarded a Postgraduate Certificate in [Specialisation]. 2. Having successfully completed 60 ECTS a student may apply to be awarded a Postgraduate Diploma in [Award Stem] in [Specialisation].

Policy guidance on exit awards is available in the TUS Policy for Exit Awards.[19]

Policy guidance on award titling is available in the TUS Policy for Taught Programme Validation and Modification.[3]

4.4 Aligning with the TUS Curriculum Design Framework

Programme design should be informed by the TUS Curriculum Design Framework set out in the Putting Learning First: TUS Learning, Teaching and Assessment Strategy.[6] Programme teams are encouraged to consult the Strategy for a full description of the framework, its principles and curriculum design approaches. These Programme Design Guidelines do not replicate the framework but instead they highlight key considerations for programme teams when applying it in practice. The Curriculum Design Framework forms part of a wider educational philosophy that emphasises student-centred learning, applied and research-informed teaching, and the development of graduate capabilities relevant to professional practice and active citizenship. The framework is closely linked to the TUS Graduate Attributes Framework[7],which informs the knowledge, skills and competences programmes are expected to develop.

When designing or reviewing programmes, programme teams should ensure that the curriculum reflects the principles and approaches outlined in the framework.

In particular, programme teams should consider:

- How the programme contributes to the development of TUS Graduate Attributes and the capabilities expected of TUS graduates;
- How curriculum design supports student-centred learning, active learning approaches and authentic assessment;
- How inclusive curriculum design principles are embedded to support diverse learner needs;
- How the programme engages with industry, employers, professional bodies and societal needs, ensuring the relevance of learning to professional and civic contexts;
- How appropriate curriculum design approaches (e.g. linear, spiral, thematic or backward design) may inform the organisation of learning.

Programme teams should also ensure that programme design reflects the principles for curriculum design articulated in the framework, including: creativity; responsiveness; inclusivity; innovation; global perspectives; access and progression; and innovation.

4.5 TUS Award Standards and Programme Learning Outcomes

Programme teams should refer to the TUS Guide to Writing and Using Learning Outcomes[8] when developing programme learning outcomes. The Guide provides detailed advice on the relationship between learning outcomes, NFQ levels, award standards and assessment, as well as practical guidance on writing programme and module learning outcomes.

Programme learning outcomes must align with the National Framework of Qualifications (NFQ)[20] Level Indicators and the relevant Award-type Descriptor, which define the expected standards of knowledge, skill and competence for each qualification level. Within TUS, the TUS Award Standard provides the key bridge between the NFQ and programme learning outcomes, translating the NFQ level expectations into discipline- and award-specific standards. Programme learning outcomes should reflect both the breadth and complexity associated with the NFQ level and the knowledge, skills and competences articulated in the relevant TUS Award Standard. Collectively they represent the minimum learning achievements expected of graduates on successful completion of the programme. A series of relevant links to related to the NFQ and TUS Award Standards are available at TUS European and National Quality System Resources.

When developing programme learning outcomes, programme teams should ensure that programme learning outcomes:

- Align with the relevant TUS Award Standard for the award;
- Collectively describe the minimum intended learning outcomes of graduates on successful completion of the programme;
- Provide a clear framework for the development of module learning outcomes, curriculum structure and assessment strategies;
- Are appropriate in number and scope, maintaining clarity and coherence and avoiding overly granular statements that resemble module learning outcomes.

Further guidance on the development and wording of programme learning outcomes, including examples and recommended practices, is available in the TUS Guide to Writing and Using Learning Outcomes.[8]

4.6 Embedding Academic Integrity as a Core Principle in Programme Design

Academic integrity is defined as a commitment to honesty, trust, fairness, respect, responsibility, and courage, embedded consistently in institutional practice and learner behaviour (National Academic Integrity Network, Academic Integrity Guidelines 2021;[21] National Academic Integrity Network 2021, Academic Integrity: National Principles and Lexicon of Common Terms).[22] These values shape a collective philosophy that prioritises ethical scholarship, transparent assessment, and authentic learning experiences within programme design. This collective orientation enables and encourages programme teams to design curricula that foster learner understanding, critical thinking, and ethical decision-making and minimise opportunities for academic misconduct. To support this, programme teams should engage in open conversations about integrity, provide consistent guidance on expectations, and create supportive learning environments that reduce pressures associated with misconduct. In the context of emerging technologies such as generative AI (National Academic Integrity Network, Generative Artificial Intelligence: Guidelines for Educators 2023),[23] programme teams should establish shared understandings of appropriate and inappropriate use, ensuring students understand boundaries while promoting responsible digital literacy.

The Putting learning First: TUS Learning, Teaching and Assessment Strategy[6] positions academic integrity as integral to curriculum design. It states that curriculum teams must first make explicit their shared beliefs about what should be taught, how students should learn, and the roles of teachers and learners in that process. This shared vision often begins with identi-

fying the graduate attributes the programme team believes students should achieve, including ethical practice, critical thinking, communication, and social responsibility.

Designing curricula that intentionally cultivate these attributes strengthens alignment between academic integrity principles and programme aims. Academic integrity therefore informs the development of programme learning outcomes, including competences such as ethical decision making, critical evaluation of sources, and responsible research practice, ensuring that graduates understand the ethical context of their discipline as well as achieving subject mastery.

NAIN Academic Integrity Guidelines[21] emphasise that academic integrity should permeate programme development, teaching, learning, and assessment policies, becoming a visible part of institutional culture. Embedding these values explicitly supports the development of learning environments where students recognise misconduct and value authentic learning. Academic integrity also shapes assessment design, requiring assessments that promote honest demonstration of learning and reduce opportunities for misconduct through authentic, varied and aligned approaches. This includes designing assessments such as personal reflection, project-based inquiry, in-class problem solving, and oral components, which are less susceptible to plagiarism or contract cheating.

With growing concerns regarding generative AI, the NAIN GenAI Guidelines, 2023,[23] highlight the need to review assessment formats and clearly define appropriate AI use to preserve assessment validity and fairness. These approaches ensure that assessment practices remain trustworthy, transparent and robust across NFQ levels.

Cultivating a culture of academic integrity requires structured teaching, learning, and student support strategies. The NAIN Academic Integrity Guidelines[21] recommend continuous, scaffolded instruction on integrity, correct referencing, research ethics, and the consequences of misconduct, beginning at induction and continuing throughout the programme. Such scaffolding aligns with the NFQ's expectation that learners develop increasing autonomy and responsibility as they progress through levels. Embedding academic integrity training through skills modules, formative activities, and discipline-specific ethics teaching reinforces equitable learning environments where expectations are consistently communicated.

4.7 Design of the Curriculum

It is essential that programme teams review and have due regard to the policy imperatives set out in the TUS Policy for Taught Programme Validation and Modification,[3] with particular reference to:

Section 7 (Overarching Programme Structure Considerations for Major Awards)

- Establishes the structural framework for programmes, including stage-based progression, ECTS credit requirements, and the design of embedded or add-on awards to support access, transfer and progression.

Section 8 (Programme and Module Design Considerations)

- Outlines key programme and module design considerations, including programme learning outcomes, award standards, module structures, delivery modes, and assessment strategies.

Careful consideration of these sections ensures that programmes are structurally sound, aligned with the NFQ and TUS award requirements, and capable of demonstrating coherent progression and achievement of programme learning outcomes.

4.7.1 Creating an Optimal Programme Structure

An effective programme structure provides a clear framework through which students progressively develop the knowledge, skills and competencies required to achieve the programme learning outcomes. Programme design typically centres on identification of:

- Core modules.
- Cognate (supporting the discipline) modules.
- Elective modules, where applicable and appropriate.

This supports the development of disciplinary/interdisciplinary foundations and progression across programme stages and helps ensure programme coherence enabling transparent learning pathways for students. Programme structures should be designed holistically, supporting the integration and sequencing of learning rather than emerging as a collection of individually developed modules.

Programme teams should consider how the overall structure of the programme supports the development of graduate attributes and the progressive achievement of programme learning outcomes. This may involve organising modules into coherent thematic or disciplinary streams and ensuring that the number and credit weighting of modules support the sequencing, integration and scaffolding of learning across programme stages.

Where possible, programme structures should emphasise consolidation of core learning through appropriately sized modules, rather than relying exclusively on 5 ECTS modules as the stages of the programme progress. Programmes should also include capstone modules that enable students to synthesise and apply knowledge and skills developed throughout the programme. In accordance with QQI Assessment and Standards (Revised 2022) capstone modules *"are designed to provide an opportunity for learners to integrate learning attained in other modules and stages. They are always necessary."*[24]

In summary, in designing the programme structure, programme teams may consider:

- The organisation of modules into coherent thematic or disciplinary streams;
- The balance between core, cognate and elective modules;
- The number, size and credit weighting of modules across the programme to avoid curriculum fragmentation and support coherence across programme stages;
- Incorporating applied learning opportunities such as work-based learning or placements (See Section 4.7.2 below);
- Including capstone modules that support integration, synthesis and application of learning.

4.7.2 Incorporating Work-integrated Learning/Work Placement

Work-integrated Learning is an important element of the TUS educational approach, providing students with opportunities to apply academic learning in professional and/or practice-based contexts. Work-integrated Learning broadly refers to structured learning experiences that integrate academic study with work or professional practice. This may include work placement, industry projects, internships or other forms of applied learning undertaken in collaboration with external organisations.

Work Placement represents one of the most common forms of work-integrated learning and typically involves students undertaking a period of supervised professional experience within an external organisation. The inclusion of work placement and work-integrated learning within programmes supports the development of professional capabilities, enhances graduate employability, and strengthens engagement between the University, industry and wider society. When incorporating Work Placement into programme design, programme teams should consider the following:

- the volume and credit weighting of the placement or work-integrated learning component within the overall programme structure;
- the timing and positioning of the placement within the programme to ensure students have developed sufficient disciplinary knowledge and skills prior to undertaking the experience;
- the capacity of the relevant sector to support placements, ensuring that placement opportunities are sustainable and available for the anticipated cohort size;
- the development of clear placement learning outcomes aligned with programme learning

outcomes and the relevant NFQ level;
- the assessment and evaluation of placement learning, ensuring that the placement forms an integrated and credit-bearing component of the programme;
- the provision of appropriate supports and engagement mechanisms with placement providers, ensuring effective supervision and meaningful learning opportunities for students.

Building on the principles of Authentic Assessment (Section 5.4.2), work-integrated learning evaluates students through the purposeful integration of academic theory and professional practice. This is managed through a trialogue between the student, academic supervisor, and industry partner. Key guidance for authentic and applied assessment in Work-integrated Learning assessment design is provided in Table 2.

Table 2. Design Considerations for Assessment In Work Integrated Learning

Design Considerations for Authentic and Applied Assessment In Work Integrated Learning	
Scaffolded Evidence	Assessment should be staged rather than terminal. Incorporate pre-placement goal setting, mid-point formative reviews, and final summative reflections to capture the full trajectory of professional growth.
Performance in Context	Move beyond measuring of hours completed. Assessments must evaluate the student's ability to navigate professional complexities and apply disciplinary knowledge in situ.
Collaborative Feedback	Integrate structured input from workplace supervisors to validate professional standards, ensuring academic staff retain final grading authority.
Individual Accountability	Individual Accountability: For team-based industry projects, include mechanisms such as peer-review rubrics or individual process commentaries to ensure fair evaluation of personal contribution within a collaborative context.

To ensure success, it is imperative that programme design include pre-placement support, placement readiness modules or activities that equip students with the skills and knowledge required for the specific professional context. A strategic analysis of the relevant sector's capacity to host students is essential. Programme teams should avoid over-saturation of specific geographic or sectoral areas and foster long-term, reciprocal relationships with partners.

Programme teams should take account of the TUS Policy on Recognition of Prior Learning (RPL)[25] when designing work placement modules and considering opportunities for exemption or recognition of prior experiential learning. In line with the principles of RPL, students should not be required to repeat learning already achieved where they can demonstrate that the relevant placement learning outcomes and associated knowledge, skill and competencies have been met through prior professional or other relevant experience.

Due consideration should be given to the inclusion of an Alternative Placement Module, aligned to the placement module learning outcomes, within the programme. Alternative Placement may be used, where appropriate, to support the achievement of intended learning outcomes, particularly in contexts where a student is unable to secure a placement or where an alternative placement opportunity or alternative assessment option is required to support a student. The Alternative Placement Module should be explicitly aligned with the placement learning outcomes, incorporate appropriate assessment strategies, and be subject to ongoing review to ensure that academic standards and the integrity of the learning experience are maintained. Such approaches may include simulation-based learning, project-based or inquiry-based learning, industry/community-engaged projects *inter alia*, that replicate aspects of professional or work-based contexts.

Policy guidance on the management and quality assurance of placements is available in the TUS Student Placement Policy.[26] Further guidance may also be sought from the Careers and Employability function in TUS.

4.7.3 The Programme Teaching and Learning Strategy

The Programme Teaching and Learning Strategy should be aligned with the overarching university Putting Learning First: Learning, Teaching and Assessment Strategy[6] and reflect a coherent, programme-level approach to delivering a high-quality, student-centred learning experience. It should articulate how the programme fosters meaningful student engagement, supports diverse learner needs, and ensures that teaching, learning, and assessment practices are responsive to evolving disciplinary, technological, and societal contexts.

The programme strategy should provide an umbrella framework that informs the design and delivery of individual modules while ensuring consistency and alignment across the programme. The programme team should take the following into consideration:

1. Use of innovative pedagogies, including active, collaborative, problem-based, and applied learning, *inter alia*, that promote participation, and critical thinking;
2. Effective use of digital technologies to enhance pedagogy and student engagement fostering meaningful learning experiences;
3. Inclusive design principles to ensure equitable access through varied engagement, representation, and assessment methods;
4. Promotion of academic integrity as a core value, fostering ethical scholarship and a sense of responsibility in learning and assessment practices;
5. Integration of sustainability, including Education for Sustainable Development (ESD), to enable students to engage with environmental, social and economic challenges, through a clearly articulated programme-level approach that ensures coherence and progression across modules and programme streams;
6. The appropriate and ethical use of emerging technologies, including generative AI, to support teaching, learning and assessment.

Overall, the Programme Teaching and Learning Strategy should ensure a coherent, inclusive, and engaging approach that supports active learning, ethical practice, and the development of requisite knowledge skills, competencies and graduate attributes.

As outlined in Section 4.6, embedding academic integrity values is a key imperative. These values shape teaching and learning strategies by requiring educators to:

- Design learning experiences that treat all students equitably;
- Create inclusive, respectful learning environments;
- Ensure transparency in expectations, support, and decision making;
- Engage in reflective practice and remain open to change;
- Collaborate with colleagues and students as a learning community.

Such strategies foster a climate where ethical behaviour is modelled and reinforced through everyday teaching and learning activities. This means ensuring students understand what is expected of them, how to meet learning outcomes, and how academic integrity applies to their own behaviour. This can be achieved by embedding explicit instruction on ethical academic behaviour, supported by clear guidance, formative opportunities, and transparent communication. This includes ongoing dialogue with students about integrity, clear definitions of misconduct, and consistent messaging across all teaching and learning contexts.

4.7.4 The Programme Assessment Strategy

The Programme Assessment Strategy should be aligned with the Putting Learning First: TUS Learning, Teaching and Assessment Strategy[6] and provides a coherent, programme-level framework to ensure that assessment practices are fair, transparent, inclusive, and aligned with programme and module learning outcomes. It should be designed to support student learning through appropriately structured, meaningful, and varied assessment approaches, while ensuring consistency and balance across modules, semesters and stages. The strategy should reflect a holistic view of assessment as an integral component of the learning process, supporting the development and demonstration of knowledge, skills, and competencies. The programme team should take the following into consideration:

1. A diverse range of assessment approaches aligned to learning outcomes, enabling students

to demonstrate different types of knowledge, skills, and competencies through authentic and applied tasks;

2. A balanced approach to formative and summative assessment, incorporating assessment FOR, OF, and AS learning[1] to support ongoing feedback, measure achievement, and develop students' learning;
3. A balanced and coordinated distribution of assessment across modules, semesters, and stages, avoiding over-assessment and ensuring a manageable and equitable student workload;
4. A structured approach to assessment, using appropriate assessment modes at different stages to reflect the level and progression of student learning;
5. Opportunities for cross-modular or integrative assessment, where appropriate, to support the synthesis and application of learning;
6. Inclusive assessment design that supports equitable participation and provides multiple ways for students to demonstrate learning;
7. Embedding of academic integrity as a core value, ensuring that assessment design promotes authentic learning and ethical practice;
8. Alignment of re-assessment strategies with module requirements and Faculty/School/Department approaches;

Overall, the Programme Assessment Strategy ensures that assessment is purposeful, aligned, and supportive of student learning, while upholding standards of quality, integrity, and equity across the programme.

The NAIN Academic Integrity Guidelines[21] emphasise that assessment must be valid, reliable, transparent, and aligned with intended learning outcomes, ensuring students earn credit only for work they have produced themselves. This principle directly shapes the programme assessment strategy and by requiring authentic tasks that cannot be easily outsourced, copied, or generated artificially. Instead, assessments must prompt critical thinking, personal reflection, application of knowledge, and process-based learning, features that naturally reduce the risk of misconduct and reinforce ethical learning behavior's (See also Section 5.4, Module Assessment Strategy.

[1] For further information on assessment FOR, OF, and AS learning, please see Assessment OF/FOR/AS Learning - National Forum for the Enhancement of Teaching and Learning in Higher Education

4.7.5 Models For Good Programme/Module Design

A range of established instructional design frameworks can support programme and module development and assessment by providing structured approaches to curriculum design. These models guide programme teams through key stages such as analysing learner needs, aligning learning outcomes with teaching and assessment, and evaluating effectiveness.

While no single model is prescribed, engagement with recognised frameworks can support a coherent, systematic and pedagogically informed approach to programme and module design. Some well-established frameworks include the:

- ADDIE Model
- Dick and Carey Model
- Kemp Design Model

A summary of the utility of these frameworks is provided in Table 3.

Table 3. Established instructional design frameworks

Framework	Utility
ADDIE Model	The ADDIE Model is one of the most widely used frameworks, offering a clear, sequential process of analysis, design, development, implementation and evaluation. Its strength lies in its simplicity and adaptability, making it suitable for structuring programme and module development in a logical and iterative way.
Dick and Carey Model	The Dick and Carey Model adopts a more detailed, systems-based approach to instructional design. It emphasises the alignment between learning objectives, assessment, instructional strategies and evaluation, ensuring that all elements of the learning experience are interconnected and systematically developed.
Kemp Design Model	The Kemp Design Model presents a flexible, non-linear approach to curriculum design. It allows programme teams to consider multiple elements of design, such as learner characteristics, content, objectives and evaluation, simultaneously, making it particularly useful in complex or iterative design contexts.

At TUS, CPID has recently developed a streamlined framework which aims to support programme teams at TUS in reviewing and enhancing module descriptors across key themes that reflect the priority areas identified by the university, including (1) Academic Integrity, (2) Artificial Intelligence (AI), (3) Inclusive Practice, and (4) Education for Sustainable Development (ESD). Consideration should also be given to the incorporating of digital technologies (See Section 5.3.3). This framework is titled AIM, denoting the key steps of *Audit, Identify, and Modify.*

Working through each theme in turn and guided by suggested prompts which can be iteratively refined and adapted in response to emerging pedagogical research and evolving instructional practices, AIM is a 3-step process that invites educators to:

1. Audit what is already present in programme documentation, *with particular reference to the programme and/or module descriptors;*
2. Identify where there is scope for development or amendments;
3. Make any necessary modifications.

The themes emphasise integrating ethical scholarship, AI literacy, equitable learning approaches, and sustainability competencies into higher education curricula to support responsible, inclusive, and future-focused student learning. Further detail on each theme highlighting key considerations for embedding into programme and module design is available in Appendix 2.

How to use the AIM Framework

AIM is structured around three stages, namely AUDIT, IDENITFY, AND MODIFY:

Table 4. The AIM Framework Stages

Stage	Activities
AUDIT	Review current module descriptors and programme documentation against each theme. The audit questions or prompts help teams establish a baseline understanding of where and how AI, Inclusive Practice, and ESD are already addressed.
IDENTIFY	Using the audit findings, identify where there is potential for more explicit or more meaningful engagement with each theme. This is not about finding deficits; it is about recognising opportunity.
MODIFY	Consider what changes to Learning Outcomes, Learning and Teaching Strategy, Assessment Strategy, and Reading and Resources Lists might look like. This stage is generative and forward-looking, designed to support collaborative curriculum development conversations.

Programme teams are encouraged to work through the framework collaboratively, using the prompts as conversation starters rather than a checklist. The framework can be applied to individual modules or used to take a holistic view across a programme. The AIM matrix is available as a key part of the framework and is designed for use both at programme team and module level, whether as part of a scheduled programme review cycle or as a proactive quality enhancement process. It does not prescribe a single correct approach; rather, it prompts reflective, evidence-informed conversation about how modules can better serve students in a rapidly changing educational landscape. The AIM Matrix is available in Appendix 3.

A key benefit of utilising the AIM framework is that it has been developed internally in TUS within CPID, enabling expert staff within CPID to support individuals and programme teams in applying it effectively during the critical stages of programme design and review.

Module-Level Design Considerations

5.0 Module-Level Design Considerations

5.1 Specifying the Module Learning Outcomes

Programme teams should ensure that module learning outcomes are developed with due regard to the guidance contained in the TUS Guide to Writing and Using Learning Outcomes.[8] Module learning outcomes define the specific knowledge, skills and competences that learners should be able to demonstrate on successful completion of a module and collectively support the achievement of programme learning outcomes. In accordance with the guide, when specifying module learning outcomes, programme teams should ensure that module learning outcomes:

- Align with the programme learning outcomes supporting the progressive development of knowledge, skills and competences across programme stages;
- Are expressed clearly and concisely using measurable active verbs and using verbs appropriate to the level of learning expected;
- Contribute to the integration and sequencing of learning within the programme and collectively enabling the achievement of programme learning outcomes;
- Are aligned with the module's teaching, learning and assessment approaches, ensuring that assessment provides valid evidence of the achievement of the stated outcomes;
- Are appropriate in scope and number and proportionate to the ECTS credit weighting and learning effort associated with the module.

Programme teams should also have regard to the appendices of the TUS Guide to Writing and Using Learning Outcomes,[8] which provide a range of practical resources to support the formulation of learning outcomes. These include examples of active verbs associated with different domains of learning, including cognitive (knowledge), affective (attitudes and values), and psychomotor (practical or technical skills). The appendices draw on recognised learning outcome taxonomies to illustrate verbs that reflect different levels of complexity and depth of learning. These resources can assist programme teams in selecting verbs that accurately reflect the intended level and type of learning expected within a module.

5.2 Optimising Directed (Class Contact) and Independent Learning Hours

Under the European Credit Transfer and Accumulation System (ECTS), ECTS credits provide the primary measure of student learning workload. These hours represent the total time a typical student is expected to spend achieving the learning outcomes of the module, including both directed learning and independent learning. The ECTS User Guide notes that the actual time may vary for individual students.

Within TUS, 1 ECTS credit corresponds to 20 to 25 total learning hours. For the purposes of quantifying learning hours in the Academic Module Manager system, a total of 20 learning hours is used for each credit. Accordingly, the total learning hours for modules of give ECTS volumes are provided in Table 5.

Table 5. Total learning hours for modules of given ECTS volumes

Module ECTS	Total Learning Hours
5	100
10	200
15	300
30	600

These total learning hours are comprised of:

1. Directed learning hours (class contact hours), such as lectures, tutorials, laboratories, studio sessions or workshops;
2. Independent or self-directed learning hours, including reading, preparation, practice, assignments, project work and assessment preparation.

Once the directed learning hours for a module have been determined, the independent learning hours are calculated based on the total notional workload associated with the module's ECTS credit value.

For example: Module X = 10 ECTS credits:

- Total learning hours: 10 × 20 = 200 hours
- Directed learning: 4 hours per week × 15 weeks = 60 hours
- Independent learning: 200 – 60 = 140 hours

It is important to note that the direct relationship exists between ECTS credits and total learning hours, rather than between ECTS credits and directed learning/class contact hours. The number of directed learning hours associated with a module will therefore vary depending on the nature of the learning and teaching approaches adopted.

The level of directed learning (class contact hours) within a module is typically determined by the module owner and programme team, taking account of several relevant factors, including:

- The award level (e.g. undergraduate or postgraduate), with postgraduate programmes typically requiring greater levels of independent learning;
- The stage of the programme, with earlier stages often requiring greater levels of directed support;
- The disciplinary area and pedagogical approach;
- The type of module, such as theoretical, practical, laboratory-based, studio-based, project-based or placement modules;
- The range and complexity of learning outcomes being assessed, including combinations of knowledge, skills and competencies.

Therefore, there is no single formula determining the relationship between ECTS credits and directed learning/class contact hours. Programme teams have flexibility to determine an appropriate balance between directed learning/class contact hours and independent learning, provided that overall student contact time and workload remains appropriate and consistent for the stage of the programme. At module level, typical directed learning/class contact hours ranges may include:

- 5 ECTS module: approximately 1–3 directed learning hours per week
- 10 ECTS module: approximately 2–6 directed learning hours per week

It should also be noted that when building a module on Academic Module Manager, it is also good practice to specify the independently learning hours consistently either as either hours per week or total hours per module across all stages of the Programme APS. Agreeing this at a programme team level will support this consistency.

5.3 Module Teaching and Learning Strategy

The Module Teaching and Learning Strategy should align with and support the overall Programme Teaching and Learning Strategy, contributing to a coherent and integrated student learning experience across the programme. While individual modules may adopt approaches appropriate to their disciplinary focus and learning outcomes, they should collectively reflect the programme's commitment to student-centred learning, active engagement, and high-quality teaching, learning and assessment practices.

At module level, teaching and learning approaches should be purposefully designed to support the achievement of module learning outcomes, while contributing to the broader programme learning outcomes and graduate attributes. Therefore, they should align programme-level priorities, including inclusive curriculum design, active and applied learning approaches, the effective integration of digital technologies, the incorporation of Education for Sustainable Development (ESD), and the appropriate use of emerging technologies such as generative AI in teaching and learning.

5.3.1 An Inclusive Curriculum: Principles of Inclusive Practice and Universal Design

Higher education providers have an ethical, moral, and legal obligation to ensure that all students should have an equal opportunity to succeed, regardless of their background, demographic characteristics or current circumstances.

Understanding diverse student needs and implementing practical strategies for inclusive curriculum design are essential for creating equitable, accessible, and meaningful learning experiences for all students (Rao, 2021).[27] Inclusive programmes can and should be academically rigorous and give authentic training in knowledge, skills and behaviours appropriate to the discipline (Hubbard and Gawthorpe, 2024).[28] By incorporating diverse perspectives into course content, utilising varied instructional methods, creating inclusive learning environments and providing multiple means of assessment, educators can foster a culture of inclusion, belonging, and support that enhances the learning experiences of all students.

One of the primary advantages of inclusive curriculum design is its ability to foster empathy and understanding among students. Access to diverse perspectives, experiences, and narratives in the curriculum can broaden students' perspectives and encourage them to challenge stereotypes, and promotes empathy and compassion for others (Lunn et al., 2022).[29]

Features of an Inclusive Curriculum

The following are the typical features of an inclusive curriculum:

- Clarifies expected knowledge and skills, recognising varied entry routes and ensuring all students begin with the foundations needed for success.
- Incorporates diverse perspectives, challenging historical power imbalances and the dominance of white, Western-European frameworks.
- Enables personalisation where feasible, offering students autonomy in demonstrating learning.
- Removes barriers to engagement, accommodating students who balance study with caring responsibilities, employment, commuting, disability, or long-term health conditions.
- Provides authentic opportunities for active learning, including problem-based, team-based, and collaborative and experiential activities shown to reduce inequalities.
- Ensures all activities are inclusive and respectful, for example by considering language and communication needs in programme design.

When designing programmes, language use, representation, and bias in curriculum materials and interactions should be reflected on.

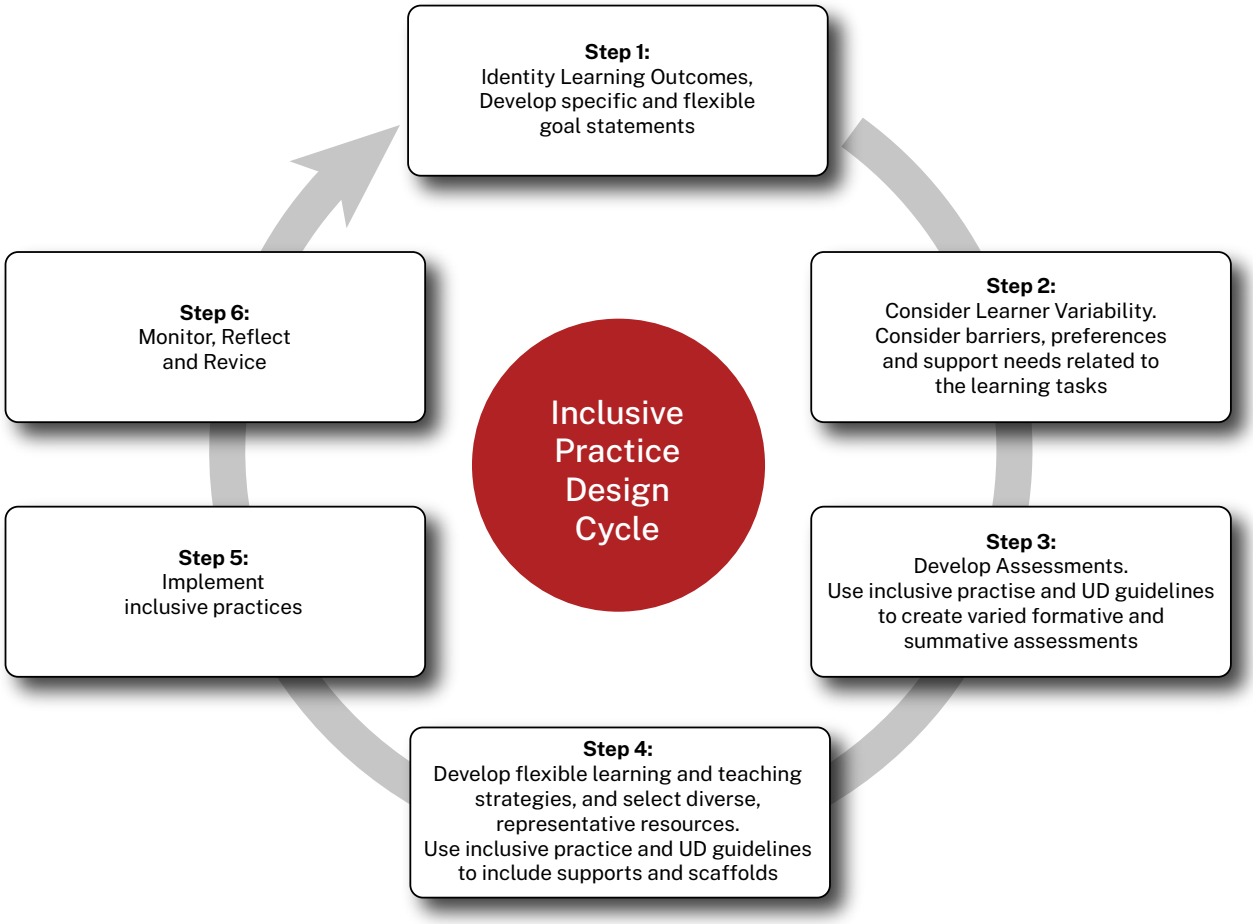


Figure 1. The Inclusive Practice Design Cycle. (Adapted from Rao & Meo, 2016)[30]

Academic integrity provides a strong ethical foundation for the design of an inclusive curriculum that is grounded in principles of inclusive practice and Universal Design for Learning. An inclusive curriculum informed by integrity therefore seeks to minimise structural barriers that may disadvantage particular student groups and to avoid practices that inadvertently increase the risk of misconduct. By providing clear expectations, transparent assessment criteria, and explicit guidance on academic conventions, lecturers support diverse learners to engage ethically and confidently with their studies. The Reaching Out to All: A set of Guidelines and Resources for a Universal Design for Learning approach to Learning, Teaching and Assessment in Higher Education is a useful resource for programme teams.

The key considerations for an inclusive curriculum when developing the respective sections of a Module Definition Form in Academic Module Manager are available outlined in Appendix 4.

This self-evaluation framework has been designed by May, H. and Thomas, L. (2010)[31] offers a tool by which to reflect upon the extent to which equality and diversity has been embedded in the design and delivery of the curriculum as well as identify future priorities. Available at: Embedding equality and diversity in the curriculum: Self-evaluation framework.

5.3.2 Strategies for Applied and Active Learning

Active and applied learning approaches are central to the TUS education philosophy, placing students at the centre of the learning process and connecting theory with real-real-world and practical contexts. Through these approaches, students engage more deeply, develop higher-order thinking and practical skills, and are better prepared to meet the needs of industry, employers and society.

What is active learning?

Active learning is an approach to teaching that actively engages students in meaningful learning activities that require them to think, apply, discuss, and reflect, rather than passively receive information. Therefore, when designing and reviewing programmes, the incorporation of active learning strategies should be considered at the programme and module levels. A comprehensive selection of active learning strategies is outlined in the TUS Compendium on Active Learning, Volume 1 (Ryan, 2021;[32] and Volume 2, Ryan, 2022).[33]

Three evidence-based, active learning strategies currently in use across TUS are:

- Team-Based Learning (TBL);
- Challenge-Based Learning (CBL); and,
- Design-Based Learning (DBL).

All three support the TUS priorities relating to student success, applied learning, regional engagement, and flexible delivery. The approaches are intentionally designed and can be embedded within existing programmes and modules, enabling staff and programme teams to enhance learning experiences in ways that are sustainable, inclusive, and responsive to student needs. Crucially, the approaches offer practical frameworks that can be adopted progressively, allowing programmes to evolve over time while maintaining academic standards and coherence.

Team-Based Learning (TBL)

Team-Based Learning (TBL) is a structured, collaborative teaching strategy originally developed by Larry Michaelsen to increase student engagement and deepen learning, particularly in large classes (Michaelsen and Sweet, 2008).[34] It is built around a sequence of individual preparation, readiness assurance testing, and team-based application exercises, all designed to ensure students first understand core concepts and then apply them collaboratively to solve complex problems. A defining feature of TBL is the intentional formation of stable, diverse teams that work together throughout a course, engaging in activities such as the Individual and Team Readiness Assurance Tests (iRAT/tRAT) and application tasks that promote critical thinking, accountability, and high-level problem-solving. There is a significant body of evidence that highlights the effectiveness of TBL across many disciplines, noting its ability to promote deep understanding, support active learning, and strengthen teamwork skills. Team-Based Learning (TBL) is fundamentally different from traditional group work due to its structured instructional design, emphasis on accountability, and intentional team formation. First, TBL is built around a highly systematised process, including pre-class preparation, readiness assurance testing, and application-focused team exercises that require all students to arrive prepared and engage at a deeper cognitive level. Traditional group work or team work typically lacks this formal sequencing and may not assess individual readiness before group interaction (Burgess and Matar, 2020).[35]

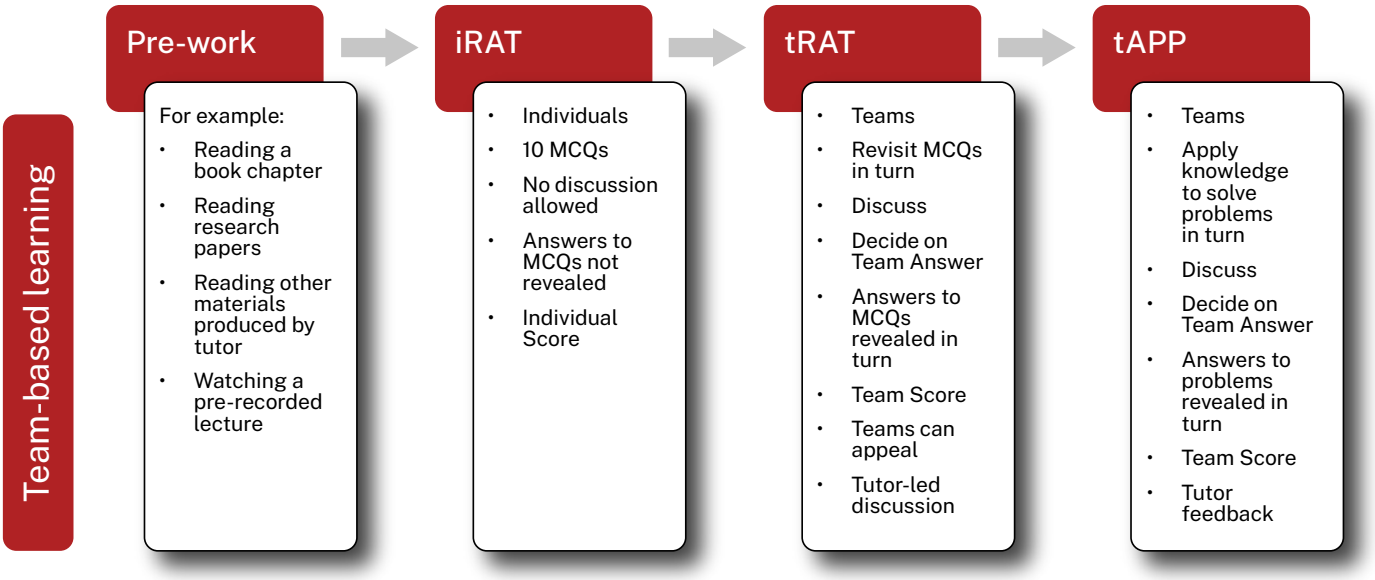


Figure 2. The Stages of TBL

Within TUS programmes, Team Based Learning can be used to strengthen student engagement, preparation, and academic confidence, particularly in the early and middle stages of study. Its structured approach supports learning in large, diverse cohorts, helping create consistent expectations for participation, teamwork, and responsibility across modules.

At the module level, TBL can be introduced by redesigning selected topics or teaching weeks using the TBL sequence of pre class preparation, readiness assurance, and team based application activities. This approach supports flexible, blended learning models, ensuring that contact time is used for active application rather than for content transmission.

At the programme level, the use of TBL across multiple modules helps students develop core transferable skills such as communication, collaboration, and peer feedback in a coherent and cumulative way. This contributes directly to student success, retention, and progression, while supporting staff through a clearly defined, evidence-informed teaching structure.

Challenge-Based Learning (CBL)

Challenge-Based Learning (CBL) is an active, student-centred pedagogical approach in which learners collaboratively engage with open-ended, real-world challenges, applying knowledge and skills to develop actionable solutions. CBL encourages students to take ownership of the learning process by investigating authentic problems, integrating interdisciplinary knowledge, and working with teachers, peers, and external stakeholders. Research shows that CBL supports deeper learning by fostering critical thinking, creativity, and self-regulation, while emphasising iterative inquiry, solution testing, and reflection (Leijon, Gudmundsson, Staaf, & Christersson, 2022).[36] CBL is grounded in theories of problem-based and inquiry-based learning. However, it distinguishes itself through its explicit focus on societal challenges, action-oriented approach, and collaboration with industry or community partners.

Challenge Based Learning aligns strongly with TUS's mission as a university of applied learning, offering students opportunities to engage with authentic, practice based challenges that reflect professional, regional, or societal contexts.

Within programmes, CBL can be used selectively and strategically, for example, within:

- Project based modules,
- Applied or interdisciplinary learning experiences,
- Capstone or final year projects.

At the programme level, CBL provides a natural focal point for integrating knowledge and skills developed across earlier modules, allowing students to demonstrate learning in meaningful, applied ways. Challenges can be discipline specific or interdisciplinary and may involve external partners where appropriate, supporting TUS's commitment to regional engagement and real world impact. CBL is inherently flexible and can be scaled to suit different cohort sizes, delivery modes, and resource contexts, making it a realistic and adaptable option across faculties.

Design-Based Learning (DBL)

Design-Based Learning (DBL) is an educational approach in which students learn by engaging in authentic design tasks that require applying theoretical knowledge to create artefacts, systems, or solutions that address real-world problems (Gómez Puente, van Eijck, & Jochems, 2013).[37] Grounded in inquiry, reasoning, and iterative problem-solving, DBL encourages learners to explore concepts through hands-on design processes, fostering creativity, innovation, and higher-order thinking. Research highlights that DBL enhances students' systems thinking, collaborative abilities, and capacity to transfer knowledge across contexts, particularly in fields such as engineering, technology, and the sciences. Teachers in DBL settings play a facilitative role, guiding both domain-specific knowledge development and the design thinking activities central to generating innovative solutions.

A flexible, living approach to programme design

Used independently, TBL, CBL and DBL enable programme teams and individual lecturers to select and apply approaches that best suit their context, discipline, and learners. Together, they support a programme level approach to teaching and learning that is:

- Student centred and inclusive,
- Grounded in applied and active learning,
- Adaptable to change and innovation over time.

By embedding these approaches into normal programme review, enhancement, and teaching practice, TUS can ensure that active learning is not an aspirational policy goal but a lived, visible experience for students and staff.

For further information and support, see the Centre of Pedagogical Innovation and Development's webpage and ongoing support is available from the Centre.

A range of additional references and resources relevant to active and applied learning strategies is available in Appendix 5.

5.3.3 Digital Technology for Learning, Teaching and Assessment

The European Digital Education Action Plan (European Commission, 2020, p.8)[38] notes that "digital education is not a marginal issue but a central component of learning, teaching and assessment in the 21st century". The development of students' digital capabilities to "live, learn, and work in a digital world" is a key focus of the TUS Learning, Teaching and Assessment Strategy,[6] while technological innovation and digital capacity are included in the seven pillars that support learning, teaching and assessment within the university.

The European Digital Competence Framework (Cosgrove & Cachia, 2025)[39] can be used by programme teams to identify examples of digital knowledge, skills and attitudes at the broader citizen level, while the JISC Digital Capabilities Framework (JISC, 2020)[40] was developed specifically for the education sector. These digital competences may incorporate discipline-specific knowledge and skills; however, programme teams should also include digital classroom technologies for teaching, learning and assessment in their programme/module design.

The purposeful integration of digital technologies in learning, teaching and assessment is a key consideration in programme design and review at TUS. The intentional use of digital tools and approaches enables programme teams to enhance active and applied learning, support flexible and inclusive delivery, and create authentic, practice-oriented learning experiences. In this context, digital technologies are not an add-on but a core enabler of the TUS approach, supporting meaningful student engagement and the development of the digital capabilities required for contemporary professional and societal contexts. The following are guiding questions for programme teams to support the integration of digital technologies into programme design:

Table 6. Guiding questions for use of digital technologies

Guiding Question	Typical Example
What pedagogical purpose does this technology offer?	Interactive H5P videos with pause points support active learning.
How does this technology support inclusive and accessible learning?	Using Vevox for anonymous polling allows everyone an opportunity to participate.
How will we address academic integrity in a technology-rich environment?	Use the FLOAT Framework (Section 5.4.3 and Section 5.3.5) to design and authenticate assessments for submission on Moodle.
How do we design summative assessments that are both technology-enhanced and academically rigorous?	Replace a traditional essay with a digital portfolio.
How can technology enhance the provision of feedback for students?	Use audio feedback in Moodle for personalised feedback.
How will we ensure students are developing digital literacies alongside subject knowledge?	Teach disciplinary and professional digital practices so that students can communicate, work and think critically in the digital environments their professions use.

An overview of the *TUS Digital Ecosystem: Software for Academic Programmes* is provided in Appendix 6. The TUS Digital Ecosystem provides an overview of the digital tools available to staff and students in TUS for learning, teaching, and assessment. Based on the Conversation Framework (Laurillard, 2013),[41] the TUS Digital Ecosystem highlights the pedagogical affordances of each digital technology to facilitate selection by programme teams, depending on their preferred pedagogical approach.

This resource supports programme teams in selecting appropriate technologies at programme and module design stage, enabling alignment between pedagogical approaches, particularly active and applied learning and the effective use of digital tools to enhance student engagement and learning outcomes.

5.3.4 Incorporation of Education for Sustainable Development (ESD)

TUS demonstrates a strong institutional commitment to embedding Education for Sustainable Development (ESD) across its teaching, learning, and assessment practices. This commitment aligns with global frameworks such as UNESCO's vision of ESD,[42] which emphasises empowering learners with the knowledge, skills, values, and behaviours necessary to contribute to a sustainable future. At TUS, ESD is not treated as a standalone concept but is integrated holistically into the curriculum, institutional strategy, and pedagogical approaches. At a strategic level, sustainability is embedded within the Putting Learning First: TUS Learning, Teaching and Assessment Strategy.[6] A key expression of this is the Graduate Attributes Framework,[5] which highlights ethical, social, intercultural, and environmental awareness. TUS graduates are expected to act as responsible global citizens, contributing meaningfully to both local and global communities. Accordingly, sustainability should be formally incorporated into programme design and development and programme modification processes, ensuring that new and existing courses reflect ESD principles.

A significant university innovation is the development of the Irish first ESD Compendium in an Irish Higher Education Institution, the Compendium of Embedding Education for Sustainable Development in Teaching, Learning and Assessment,[43] which showcases best practices in embedding sustainability across teaching, learning, and assessment. This compendium highlights research-informed approaches and aligns with the ESD for 2030 Priority Action Areas,[44] including policy advancement, educator capacity building, and local-level action. It serves as a practical guide for educators and stakeholders, promoting a culture of sustainability and supporting the integration of ESD across disciplines.

CPID plays a central role in operationalising ESD within TUS by providing Continuous Professional Development opportunities, resources, and support that enable staff to embed sustainability into their teaching practice. As a key initiative, the Certificate in Embedding Education for Sustainable Development (ESD) in the Curriculum within the Master of Arts in Academic Practice, is available to all TUS staff. This programme equips educators with the knowledge and skills required to design inclusive, student-centred learning environments underpinned by sustainability principles. The module integrates flexible delivery modes and collaborative learning approaches, aligning with Sustainable Development Goals (SDGs) such as Quality Education (SDG 4) and Reduced Inequalities (SDG 10).

In addition to formal modules and strategic initiatives, TUS provides a wide range of supplementary resources, including webinars, podcasts, and sustainability-focused projects. These resources enhance staff and student engagement with ESD and support continuous professional development. Collectively, these initiatives demonstrate a whole-institution approach in which ESD is embedded across curriculum design, teaching practices, and institutional culture, and they can be accessed here: CPID Education for Sustainable Development in the Curriculum (ESD) Resources.[43]

Two key resources in TUS include the:

- Student Sustainability Awareness Assessment (Sulitest)[45]
- Sanchez Report[46]

Sanchez Report

A report by Dr Rodrigo Lozano presents a STAUNCH® (*Sustainability Tool for Assessing. Universities' Curricula Holistically*) sustainability assessment of 65 TUS degree programmes across 24 departments.[46] The full report and a segregated versions for each Faculty/

School are available at the following link: Sanchez 2026. STAUNCH® (Sustainability Tool for Assessing. Universities' Curricula Holistically). These reports provide a valuable baseline to consider programme design/programmatic review from a sustainability perspective. Programme teams are encouraged to access and review the evaluation for their relevant programmes.

Of 2,699 modules assessed, 1,675 contribute to sustainable development (SD), with 65% of students enrolled having been exposed to SD content. Contributions are predominantly medium strength, with a primary focus on the economic dimension, followed by environmental, cross-cutting, and social dimensions. Only one degree achieved a very high SD contribution. The report recommends greater cross-departmental collaboration on sustainability teaching, an 'Educate the Educators' initiative for staff, and a deeper study of sustainability competences and pedagogical approaches to strengthen SD integration across TUS curricula.

5.3.5 Incorporation of Generative AI as a Teaching and Learning Tool

Generative AI (GenAI) represents both a challenge and a significant pedagogical opportunity for higher education. Whilst much institutional attention has appropriately focused on the implications of GenAI for assessment integrity, this section addresses a distinct and complementary question: *how can GenAI be deliberately and purposefully incorporated as a tool to enhance teaching and learning at the module level?*

The HEA Generative AI in Higher Education Teaching & Learning Policy Framework (2025)[47] explicitly calls on institutions to support educators in developing the knowledge and capacity to exploit the benefits of AI in ways that are educationally grounded, equitable, and aligned with institutional values. This section supports that expectation by providing a framework for thinking about the pedagogical roles GenAI can play and the practical considerations for module design.

It is important to note that this section focuses on the use of GenAI as a learning and teaching tool, that is, the deliberate incorporation of AI into the

learning environment to support, extend, and enrich the student experience. Considerations relating to academic integrity, appropriate and inappropriate use in assessment, and AI-resilient assessment design are addressed separately in Section 5.4.3. This distinction reflects a broader principle: that how AI is used during learning and how it is managed at the point of assessment are related but distinct design decisions, each requiring its own educational rationale.

The Pedagogical Roles of Generative AI in Learning and Teaching

Mollick and Mollick (2023)[48] identify seven distinct roles that AI can play in learning contexts, each with different pedagogical purposes: Tutor, Coach, Mentor, Teammate, Student, Simulator, and Tool. This taxonomy is a useful starting point for module design because it foregrounds intentionality: the question is not whether students will encounter GenAI, but how educators can assign it purposefully so that students learn both with AI and about AI. In practice, these roles may manifest in module design in a variety of ways: AI acting as a Socratic tutor that questions students' understanding; as a simulator of professional scenarios for rehearsal; as a research tool for exploring a topic before critical evaluation against disciplinary sources; or as a challenger, generating a counter-argument that students must interrogate and respond to. Across all of these roles, the common principle is that the student remains the thinker: AI can provoke, support, scaffold, and extend, but it should not substitute for the cognitive work that the learning outcome requires.

AI Literacy as a Graduate Attribute and Disciplinary Competence

The incorporation of GenAI into module-level learning and teaching is inseparable from the development of AI literacy. AI literacy is distinct from general digital literacy: it encompasses the capacity to understand what AI systems can and cannot do; to evaluate AI outputs critically against disciplinary standards; to use AI tools purposefully and ethically in professional contexts; and to reflect on the implications of AI for knowledge, expertise, and practice in one's own field. UNESCO (2024)[49] and the HEA (2025)[47] both identify AI competency development as a key priority for higher education, emphasising that graduates entering AI-integrated workplaces will need to be not merely users of AI, but informed, critical, and responsible practitioners who can maintain their own professional judgement in AI-augmented environments.

Programme teams should therefore consider where and how AI literacy is explicitly developed across the programme, rather than assumed. For some disciplines, engaging with AI tools is already a core professional competence (for example, in healthcare informatics, data analytics, or communications). For others, the primary goal may be to equip students to critically interrogate AI-generated content, understand its limitations, and apply disciplinary standards to evaluate it. In either case, AI literacy should be understood as a progressive graduate attribute that is scaffolded across programme stages, beginning with foundational awareness and developing towards informed, independent, and discipline-specific AI capability.

Practical Considerations for Module Design

When incorporating GenAI as a teaching and learning tool at module level, programme teams should consider the following:

Table 7. Practical considerations for incorporating Gen AI during Module Design

Practical Considerations for Module Design		
A	**Intentionality and alignment with learning outcomes**	• The incorporation of GenAI into learning activities should be driven by educational purpose. • The role AI plays should be explicitly connected to what students are expected to learn and should support the development of the intended knowledge, skills, or competencies at the relevant NFQ level.
B	**Equity of access**	• Where GenAI tools are recommended or required in learning activities, module teams should ensure that all students have equitable access. • Emerging evidence (Shrestha, Ilieva and So, 2025)[50] indicates a growing capability gap between free-tier and paid AI tools. • No student should be disadvantaged by their level of access to commercial AI tools; learning activities should be designed with free or institutionally provided tools as the baseline.
C	**Scaffolded introduction**	• Students cannot be assumed to possess the AI literacy required to engage critically with GenAI tools. • Learning activities that involve AI use should be accompanied by explicit instruction in how to prompt effectively, how to evaluate outputs critically, how to identify limitations, bias, or inaccuracies, and what ethical obligations apply. This scaffolding is a prerequisite for meaningful AI-integrated learning, not an optional add-on.
D	**Transparency with students**	• Module teams should clearly communicate to students about the purpose of any GenAI-integrated learning activity, what they are expected to do themselves, and what role the AI is playing. • Students benefit from explicit discussion of why AI is being incorporated, the educational rationale, and the limits of AI use within that specific learning context.
E	**Discipline-specificity**	• The relevance and appropriate use of GenAI varies significantly across disciplines. Dell'Acqua et al. (2026)[51] identify the "jagged frontier" of AI capability: AI is unpredictably strong in some domains and weak in others, with direct implications for module design. • Programme teams should consider how GenAI's capabilities and limitations interact with their specific discipline, and what it means for graduates in that field to be competent, critical, and ethical users of AI in professional practice.

The FLOAT Framework and Module-Level AI Integration

At TUS, the Framework for Learning with Outcomes and AI Tools (FLOAT; Mac Giolla Rí, 2026)[52] provides a dedicated instrument for module-level AI-aware design. FLOAT uses a navigational metaphor to describe four environments for AI integration: The Shore (AI-Excluded), Shallow Water (AI-Restricted), The Lap Pool (AI-Hybrid), and The Open Sea (AI-Integrated), and supports educators in making deliberate, outcome-linked decisions about the level of AI integration appropriate for both learning and assessment phases of a module. A key principle of FLOAT is that learning and assessment need not be positioned at the same level: students may explore and rehearse with AI support during learning, while being assessed at a lower level where independent capability must be demonstrated. This "oscillation principle" provides significant flexibility for incorporating GenAI as a learning tool without compromising assessment validity. FLOAT is the module-level instrument embedded within the AIM (Audit – Identify – Modify) framework described in Section 4.7.5 of these Guidelines.

5.4 Module Assessment Strategy

5.4.1 Integrating Formative and Summative Assessment

The Module Assessment Strategy should be aligned with the overarching Programme Assessment Strategy. Each module should adopt a balanced approach to formative and summative assessment that reflects its level, learning outcomes, and position within the programme. Modules at earlier stages typically place significant emphasis on formative assessment to support student transition, engagement, and skill development.

At module level, assessment design should typically distinguish between the balance of formative and summative assessment and the complementary roles of assessment FOR, OF, and AS learning, ensuring clarity of purpose and coherence in practice.[2]

Accordingly, a balanced use of formative and summative assessment is adopted, aligned to the module level and learning outcomes, and contributing to an appropriate distribution of assessment across the programme;

- Formative assessment may be embedded to support learning development through feedback, practice, and opportunities for improvement,
- Summative assessment may be designed to evaluate achievement of learning outcomes in a valid, reliable, and fair manner.

Assessment FOR learning may be integrated through timely feedback and feedforward processes that guide student improvement and support ongoing development. Assessment OF learning may be used to measure and confirm student attainment against defined criteria and standards, ensuring academic rigour and alignment with learning outcomes. Complementing these, assessment AS learning may be incorporated through structured reflection, self-assessment, and peer engagement, enabling students to develop self-regulated learning capabilities. Together, these approaches may be realised through the design of authentic, discipline-relevant assessment tasks that support the integration and application of learning, alongside embedded opportunities for engagement with assessment criteria, dialogue, and reflection to further enhance students' assessment literacy.

[2] For further information on assessment FOR, OF, and AS learning, please see Assessment OF/FOR/AS Learning - National Forum for the Enhancement of Teaching and Learning in Higher Education

5.4.2 Fostering Authentic Assessment

Authentic assessment focuses on evaluating students' ability to apply knowledge and skills in real or realistic contexts, with an emphasis on meaningful, practice-based performance. Students demonstrate not only what they know, but also what they can do with that knowledge. Programme teams should design assessment tasks that enable students to demonstrate disciplinary knowledge, procedural skills and professional practice. The aim of authentic assessment is for students 'to go beyond reproducing disjointed and superficial information, encouraging them to achieve a deeper understanding, construct new knowledge, apply learning in real-world contexts and develop 21st-century skills such as critical thinking, problem-solving and communication' (Villarroel et al., 2018; Vlachopoulos & Makri, 2024, cited in Zhan et al., 2025).[53]

Authentic assessment mirrors realistic, discipline-relevant tasks, challenges, and problem-solving processes and situates learning within contexts that are 'personally, professionally and socially relevant to students, connecting them to their discipline, interests, experiences and future careers' (Bone and Bugeja, 2025).[54] It empowers students to engage more deeply with their learning experiences and promotes student agency; students are involved in planning, goalsetting, self-evaluation and reflection (Zhan et al., 2025).[53] Programme teams should design assessment tasks that reflect these principles, ensuring that tasks are accessible, flexible and responsive to diverse learning needs and backgrounds. Examples include case studies, research projects, simulations, portfolios and design challenges.

Many authentic assessment tasks incorporate social collaboration through team-based problem solving, group research projects and peer review. However, where collaboration is used, programme teams should ensure that appropriate mechanisms are in place to assess individual contribution fairly.

Authentic assessment ensures that students demonstrate required competencies in credible and meaningful ways. Programme teams should ensure that academic integrity underpins assessment design, so that assessment practices genuinely measure learning while maintaining fairness, transparency and responsibility, enabling students to demonstrate original engagement with disciplinary knowledge.

The Putting Learning First: TUS Learning, Teaching and Assessment Strategy[6] strengthens this connection by explicitly identifying authentic assessment as a core institutional commitment. It states that authentic assessments should *"mirror real-life uses of the discipline,"* promoting applied, contextualised tasks that build graduate attributes such as ethical judgement, problem-solving, and communication skills. Designing assignments with real-world relevance makes it more difficult for learners to plagiarise or rely on generic responses, thereby embedding integrity into the very structure of learning.

The Repeat Assessment Strategy

Programme teams should take careful account of Section 2.12: Module Repeats of the TUS Academic Regulations for Taught Programmes[12] when designing repeat assessment strategies. In particular, programme teams should ensure that repeat assessment arrangements are clearly defined within module descriptors and aligned with the learning outcomes to which the original assessment has been mapped. Repeat opportunities should be designed to enable students to retrieve failure rather than improve grades, and should reflect the nature of the original assessment, be equivalent in standard and demand to the original, while allowing for appropriate variation where necessary. Programme teams should also consider the distinction between external repeat students and repeat and attend students.

Repeat strategies should be appropriate to the module type, learning outcomes and assessment approach, in line with Section 2.12 of the regulations. Where continuous assessment elements are included, consideration should be given to whether marks may be carried forward or require re-assessment, taking account of fairness and academic integrity.

It is vital that the repeat assessment strategy clearly outlines the mechanism for reassessment of failed components (e.g. new examination paper, revised continuous assessment, or alternative project-based assessment, as appropriate).

A range of considerations for authentic assessment design are outlined in Appendix 7 (A) while authentic assessment task checklist is provided in Appendix 7 (B).

5.4.3 A Focus on Academic Integrity & Gen AI in Module Assessment Design

As outlined in Section 4.6, *Embedding Academic Integrity as a Core Principle in Programme Design* academic integrity in assessment is a longstanding national priority in Irish higher education, grounded in the values of honesty, trust, fairness, respect, responsibility, and courage articulated in the QQI Academic Integrity National Principles and Lexicon (QQI, 2021).[22]

Designing a module with academic integrity in mind requires embedding ethical, transparent, and fair practices into every element of the module: learning outcomes, teaching approaches, assessment, and student support. Academic integrity requires that assessments directly measure the stated learning outcomes and are designed to minimise opportunities for academic misconduct, including plagiarism and contract cheating. Robust assessment strategies (valid, fair, reliable, and transparent) must be embedded at module level. This means that modules must include clear guidelines on;

- Acceptable versus unacceptable collaboration,
- Correct referencing practices,
- Expectations around use of digital tools, including AI,
- Consequences of misconduct.

Programme teams should give careful consideration to use of authentic assessments (Section 5.4.2), such as applied tasks, case studies, or reflective work, inter alia because they reduce opportunities for cheating and ensure students demonstrate original, contextualised learning.

The emergence of generative AI (GenAI) does not replace the foundational commitment to academic integrity; it requires it to be renewed and operationalised in new ways. The NAIN Generative AI Guidelines for Educators (National Academic Integrity Network, 2023)[23] identify two urgent priorities for assessment design under GenAI conditions: clarifying appropriate and inappropriate AI use for students in each assessment context, and redesigning assessment tasks to preserve validity and fairness. The following addresses both establishing the principles and practical considerations for academic integrity in module assessment design at TUS in the context of a rapidly evolving landscape int the GenAI era.

The Changed Integrity Landscape: Design Over Detection

The traditional framing of academic integrity, in which misconduct is identified primarily through detection and penalised after the fact, is insufficient as a primary strategy in a world where GenAI tools are ubiquitous, rapidly evolving, and accessible to all students. Scholars such as Eaton (2023)[55] have described the contemporary integrity context as "postplagiarism": AI-generated content has no identifiable human author to attribute, and the boundaries between student-authored, AI-assisted, and AI-generated work are increasingly difficult to delineate. In this context, the core integrity question shifts from "Did the student use AI?" to "Can the student demonstrate that the understanding, judgement, and capability are genuinely their own?"

AI detection tools are not a reliable response to this challenge. Empirical research demonstrates that such tools yield false-positive rates of 10 - 20% and are systematically biased against texts written by non-native English speakers (Liang et al., 2023).[56] In the Irish higher education context, where student cohorts include significant proportions of multilingual and international students, this bias raises serious equity concerns: detection tools risk penalising students based on linguistic background rather than evidence of misconduct. The HEA AI Policy (2025)[47] similarly cautions against over-reliance on detection-based approaches, recommending instead that institutions invest in assessment design as the primary integrity mechanism.

The evidence-based response to this challenge is a design-over-detection principle: academic integrity is secured through assessment tasks that make student thinking, judgement, and authorship observable, not through surveillance or probabilistic detection. TUS module design should be grounded in this principle, with assessment redesign, rather than detection, as the primary response to the GenAI integrity challenge.

Clarifying Appropriate and Inappropriate AI Use

A foundational integrity requirement is that students understand, clearly and unambiguously, what AI use is permitted within each assessment context. The NAIN Guidelines (2023)[23] specifically recommend that institutions move away from blanket institutional AI policies toward module- and task-level clarity,

explicitly communicated in assessment briefs. Inconsistent or unexplained expectations across modules create conditions in which inadvertent misconduct is more likely, and in which students cannot develop the informed, reflective AI practices that higher education should cultivate.

Module teams should specify AI permission levels within each assessment brief, making explicit what AI tools may or may not be used, at which stage of the task (preparation, drafting, final submission), and for what purpose. Where AI use is permitted, students should also be required to acknowledge and reflect on its use. This proportionate transparency requirement, asking students to account for AI use rather than simply prohibiting or permitting it, supports the development of ethical, critically reflective AI practice aligned with professional norms in most disciplines.

Designing for Integrity: Visibility Triggers and AI-Resilient Assessment

The primary mechanism for preserving academic integrity under GenAI conditions is assessment design that makes students' thinking observable, regardless of the tools used during the process. Module teams should consider incorporating one or more "visibility triggers" into assessment design: specific components that require students to demonstrate understanding, decision-making, or authorship in ways that AI cannot substitute. Examples include oral defence or viva components; process logs or design journals documenting how decisions were made; decision rationale statements explaining and justifying choices; annotated artefacts showing where AI was used and how the student evaluated and modified its outputs; and live or in-class elements where independent performance is required.

The degree to which AI can substitute student effort varies significantly across assessment types, disciplines, and tasks. Module teams should conduct a realistic appraisal of whether their current assessments can be completed to a passing standard by GenAI with minimal human input, and where this is the case, whether the task requires redesign, supplementation with a visibility trigger, or repositioning along the AI integration spectrum. Assessment tasks that require students to draw on personal experience, professional context, live interaction, real-time reasoning, or discipline-specific judgement applied to specific cases are inherently more integrity-robust than generic, unsupervised written tasks on broad topics.

Key Considerations for Module-Level Integrity Design

When reviewing or designing module assessments with respect to academic integrity under GenAI conditions, module teams should consider the following:

Table 8. Key considerations for academic integrity and GenAI

Practical Considerations for Module Design		
A	**Embed integrity through design, not declaration.**	Academic integrity statements and AI use declarations are not substitutes for task design. Integrity is most reliably secured through assessments that require students to demonstrate their own thinking in observable ways.
B	**Clarify AI permissions explicitly in assessment briefs.**	Each assessment brief should specify what AI tools are permitted or prohibited, at which stage, and for what purpose. Students should not be left to infer AI permissions from any general institutional policy alone.
C	**Require proportionate transparency.**	Where AI use is permitted, students should be required to reflect on and acknowledge how AI was used. This builds a culture of ethical, reflective AI practice rather than one of concealment.
D	**Review assessments regularly.**	GenAI capabilities are advancing rapidly. Assessment designs that were integrity-robust in one academic year may require revision in the next. Programme teams should treat assessment designs as provisional and schedule regular reviews, at least annually, to consider whether changes are needed considering evolving AI capabilities and emerging evidence.

The FLOAT Framework as a Module-Level Design Instrument

At TUS, the Framework for Learning with Outcomes and AI Tools (FLOAT; Mac Giolla Rí, 2026)[52] provides the module-level instrument for AI-aware assessment design within which these integrity principles are operationalised. FLOAT's design-over-detection principle, its seven Think Points guiding educators from outcome classification to safeguard design, and its emphasis on visible human judgement at the point of assessment together constitute a structured, evidence-grounded approach to the integrity challenges described in this section. FLOAT is explicitly aligned with the HEA AI Policy (2025),[47] the NAIN guidelines (2023),[23] and the ALTITUDE National Charter for Universal Design in Tertiary Education (2024).[57] Module teams designing or reviewing assessments with respect to academic integrity are directed to FLOAT as the primary instrument for this work at TUS, operating within the broader AIM Audit – Identify – Modify framework described in Section 4.7.5.

5.5 Identifying Module Reading Lists and Library Resources

The following guidelines set out the requirements and good practices for including module reading lists and library resources in new programme proposal forms. They are designed to:

- ensure all proposed modules include adequate academic resources to support student learning;
- facilitate early engagement with the Library in order to secure access to required materials.
- promote consistency across programme documentation.

5.5.1 Consultation with the Library

It is vital that there is consultation between Academic staff and the Library team during programme design. The Library is available to:

- Advise on best practice in relation to identifying module reading lists and library resources;
- Review draft reading lists for availability and access and advise on alternative editions or e-versions;
- Support the inclusion of relevant Open Access material;
- Estimate costs of new acquisitions to inform programme approval.

A Library Resources Statement should be included in the Learning Resources Required section of the New Programme Proposal Form (TP01) submitted to Academic Council during the planning approval stage of programme development. This statement should indicate whether existing resources are sufficient or if new purchases, additional licenses, or subscriptions will be required.

5.5.2 Principles for Inclusion of Reading Lists in Module Definition Forms

1	**Alignment with Learning Outcomes**	• Reading lists should directly support the intended learning outcomes of the module. • A balance of core, recommended, and further readings should be included.
2	**Accessibility and Equity**	• Preference should be given to resources available electronically, ensuring access for all students, including those studying remotely. • Open Access and Open Educational Resources (OER) should be prioritised, where appropriate. The Library recommends that at least 20% of recommended course materials are OA/OER, where available.
3	**Currency and Relevance**	• Texts should be current, authoritative, and reflective of recent developments in the discipline. • Use resources published within the last five years, especially in fast-moving fields. • For less time-sensitive subjects, classic texts can be considered but Module Authors should always check for newer editions to ensure the information remains up to date.

5.5.3 Requirements for Programme Proposal Forms

Each Module Definition Form should include:

1	**Required Reading List**	• Range of 2 to 5 essential texts, journal articles, or other key resources that students should engage with. This should include a maximum of 2 essential texts. • Full bibliographic details (APA/Harvard format as per institutional guidance).
2	**Recommended Reading**	• Range 4 to 8 texts, journal articles.
3	**Supplementary resources**	• A broader list of supplementary resources that provide additional perspectives. (including Non-ISBN Literary Resources including Journals, articles, websites and other resources). • Inclusion of relevant online databases, e-books, journal collections, or media resources (with URLs where available).

Best Practice for Compiling Reading Lists	1. Prioritise digital availability (eBooks, eJournals). 2. Use permalinks (permanent static URL pointing to specific page, not copied from a browsing session). 3. Avoid over-reliance on a single textbook; diversify sources. Highlight key chapters or articles rather than entire books, where appropriate. 4. Embed inclusivity by including diverse authors, perspectives, and voices.

Monitoring and Updating	1. Reading lists must be reviewed annually by the programme team as part of the module review cycle. 2. Library resource availability must be reassessed by the programme team or module lecturer when new editions are published or resources become obsolete.

Format in Academic Module Manager Template	Core Reading List	1. Author (Year). Title. Edition. Publisher. [ISBN / DOI / URL] 2. ...
	Recommended Reading	1. Author (Year). Title. Edition. Publisher. [ISBN / DOI / URL] 2. ...
	Supplementary resources	1. Permalink 2. ...

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4. TUS Policy Programmatic Review
5. TUS Procedures for Programmatic Review
6. Putting Learning first: TUS Learning, Teaching and Assessment Strategy
7. TUS Graduate Attributes Framework
8. TUS Guide to Writing and Using Learning Outcomes
9. TUS Policy and Procedures for Collaborative Provision (National and Transnational)
10. TUS Policy for Participation in the European approach for the Quality Assurance of Joint Programmes
11. TUS Student Placement Policy
12. TUS Academic Regulations for Taught Programmes
13. National Strategy for Higher Education to 2030
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Appendices

Appendix 1. Guidance on the Specification of Entry Requirements and Access

1. Undergraduate Programme Entry

The typical entry requirements for programmes in TUS are listed below. Exceptions to these requirements are at the discretion of the Programme Board.

NFQ Level 8	Leaving Certificate Requirement 6 Subjects at ordinary level minimum grade 6 (O6/H7) including 2 with minimum of grade 5 at higher level (H5) QQI Award Requirements Any Level 5 QQI award with a grade of distinction in at least 3 modules
NFQ Level 6 and Level 7	Leaving Certificate Requirement 5 subjects at ordinary level minimum grade 6 (O6/H7) QQI Award Requirements Any Level 5 QQI award

- Where a programme requires a specific Leaving Certificate Subject, Level 5 Major Award, or a specific Level 5 Component, these should be specified in the entry requirements.
- Where a programme requires a specific grade in a subject of component this should be specified in the entry requirements.

Other Entry Requirements	Some programmes have additional entry requirements not related to the Leaving Certificate, e.g., portfolio submission. Where this is applicable, it should be included in the entry requirements listed in the programme documentation.
Leaving Certificate Subject Entry Requirements	English and Irish In general, applicants are required to present either English at Ordinary Level minimum Grade 6 (O6/H7) or Irish at Foundation Level minimum Grade 3 (F2/O6/H7). Consistency in English and Irish entry requirements across programmes is encouraged where appropriate. Mathematics In general, the Maths requirement for all programmes levels is Ordinary Level minimum Grade 6 (O6/H7). A number of programmes elect to accept Foundation Level Grade 2 (F2/O6/H7) or not require Maths as a subject. The programme design/review board will determine the level of mathematical preparation necessary to ensure students can meet the specific demands of the programme. There are some programmes which require a higher minimum grade in Maths, usually related to accreditation with a professional body.

Leaving Certificate Subject Entry Requirements	Science The following subjects in the Leaving Certificate are recognised laboratory science subjects: Agricultural Science Biology Chemistry Physics Physics and Chemistry (Joint) Language Whilst some universities require an additional language for entry to some programmes, that is not a typical requirement for TUS.
QQI Award Entry Requirements	As outlined above, in general, any Level 5 award is accepted for entry to Level 6/7 programmes in TUS. Some programmes may require specific component awards as essential requirements. Entry to Level 8 programmes ordinarily requires a QQI Level 5 award with a minimum of three distinctions. Some programmes may require a specified major award, particular component awards, or a higher number of distinctions. Where applicable, these specific requirements should be clearly stated.
Mature Applicants	Some programmes require mature applicants to undergo additional assessment to determine their suitability for admission. This may include an interview, test, audition or other form of evaluation. This typically applies in the situations outlined below. High-demand programmes Where the number of mature applicants significantly exceeds the quota of places, it may be necessary to introduce additional assessment. Regulated or accredited programmes Where assessment of mature applicants is mandated as part of maintaining programme accreditation, these specific requirements should be clearly documented.
Other School Leaving Awards	It is not necessary to include other EU/UK school leaving awards as TUS follows the sectorally agreed joint document titled Entry Requirements Criteria for EU/ EFTA/UK Applicants in assessing EU qualifications for entry to Undergraduate programmes. Other international school leaving awards are assessed by TUS global as part of international student entry.

2. Taught Postgraduate Entry

The determination of entry requirements rests with the Programme Board. Entry requirements should be clearly defined to enable admissions and academic staff to make consistent, criteria-based decisions on applicants and their suitability for the programme. The following criteria should be included in the specification:

- The minimum award and award classification at undergraduate level;
- Any subject of cognate discipline requirements;
- Any other essential criteria, e.g. post qualification experience requirements, regulatory body examination/ registration requirements, *inter alia*.

3. Additional Considerations for Undergraduate & Taught Postgraduate Entry

English Language Requirements	TUS has two policy documents which outline the required level of English language proficiency for applicants.
EU/UK Applicants	Undergraduate and postgraduate entry requirements for English language proficiency for EU/EFTA/UK applicants align with the sectoral agreed joint document titled Entry Requirements Criteria for EU/EFTA/UK Applicants (p9-11). This document is updated annually, and scoring may be adjusted to reflect changes in proficiency testing and trends in grades awarded.
All other Applicants	English language requirements for international applicants are outlined in the TUS English Language Policy (p6)
Recognition of Prior Learning	The TUS RPL policy provides for applicants to present certified and experiential learning for entry to programmes. Policy guidance is available at TUS Policy on Recognition of Prior Learning.

Appendix 2. About the AIM Framework Themes

1	**Academic Integrity**	Embedding academic integrity into programme and module design in higher education involves intentionally weaving ethical scholarship into the structure, learning outcomes, and teaching and assessment strategies of a curriculum as a core educational principle that shapes how students learn, engage with knowledge, and demonstrate their understanding. Building academic integrity into the fabric of programme and module design supports students in developing the values and behaviours essential for honest, responsible academic and professional practice.
2	**Artificial Intelligence (AI)**	The rapid integration of generative AI into learning, teaching, and professional practice requires educators to actively consider how modules address AI literacy, academic integrity, and the discipline-specific implications of AI. The AI column in AIM draws on current HEA policy guidance and, at TUS, connects to the Framework for Learning with Outcomes and AI Tools (FLOAT) for module-level assessment design as a dedicated instrument for module-level AI-resilient assessment design. AIM provides the broader review structure within which FLOAT and other specialist tools can be meaningfully applied.
3	**Inclusive Practice**	Inclusive Practice reflects a commitment to ensuring all students have equitable opportunities to learn and demonstrate their learning. It encompasses the principles of Universal Design (UD) and culturally responsive curriculum design. The prompts for this theme are aligned with the TUS Learning, Teaching and Assessment strategy which are underpinned by student-centred and accessible approaches to education.
4	**Education for Sustainable Development (ESD)**	ESD equips students with the knowledge, skills, values, and dispositions to engage critically with environmental, social, and economic sustainability challenges. Aligned with the UN Sustainable Development Goals and UNESCO's ESD 2030 framework, ESD in higher education moves beyond content delivery to empower students with the competencies to change the way they think and work towards a sustainable future. ESD in higher education enables students 'to understand the world around them and to identify the links and interdependencies between our individual actions, wider society and the natural and humanly constructed environment, locally and globally' (HEA, 2024).[3]

[3] HEA (2024) ESD to 2030: Second National Strategy on Education for Sustainable Development. Dublin: Higher Education Authority.

Appendix 3. The AIM Review Matrix[4]

	Academic Integrity	Aritificial Intelligence (AI)	Inclusive Practice	Education for Sustainable Development (ESD)
AUDIT How the theme is addressed in the documentation				
Learning Outcomes (LOs)	Is Academic integrity, to foster ethical behaviour, embedded as a core, assessable programme learning outcome (PLO)?	Is the potential impact of AI on the discipline considered in the LOs? Are students required to consider and respond to the potential impact of AI in the discipline?	Are the LOs written clearly and accessibly, in student-friendly language? Are diverse/international perspectives explicitly referenced in the LOs?	Do the LOs reference sustainability, social responsibility, or global citizenship? Are students invited to consider the ethical, environmental, or societal dimensions of the discipline?
Learning & Teaching Strategy	Is academic integrity modelled to and fostered among students so that they recognise good academic practice? Are guidelines provided on the correct use of referencing, citation, and academic writing conventions? Are there opportunities to set low-stakes tasks where students can practise skills such as like citation and paraphrasing?	Are there references to the potential use of AI to enhance student learning? Is AI literacy fostered among students so that they understand how to use AI with integrity?	Is information provided to students using multiple means of representation — i.e. not solely text-based; use of practical demonstrations, video, images and audio? Do students have the opportunity to engage with the material in different ways — e.g. reflection, discussion, pair work, group work, independent learning? Are inclusive teaching approaches, such as problem, team-based and collaborative learning, employed? Is there an explicit reference to reflecting the diversity within the classroom and across the university, and to allowing students to draw on and share their lived experiences relating to the concepts? Is there an opportunity to consider global perspectives?	Are there references to real-world issues, community contexts, or global challenges in how learning is facilitated? Are students given opportunities to engage with complexity, uncertainty, or contested knowledge — hallmarks of ESD pedagogy?

[4] *Developed by Kelly, E. (2026). AIM - Audit – Identify – Modify: A framework for programme and module (re)design at TUS. Technological University of the Shannon (TUS)*

	Academic Integrity	Aritificial Intelligence (AI)	Inclusive Practice	Education for Sustainable Development (ESD)
AUDIT How the theme is addressed in the documentation				
Assessment Strategy	Does the assessment strategy include authentic, applied, or personalised assessments that reduce opportunities for plagiarism or contract cheating? Do the assessment tasks require higher order thinking (analysis, evaluation, creation) rather than retrieval only? Are explicit instructions provided on what forms of assistance are permitted, including the acceptable use of AI tools? Are formative feedback opportunities identified that emphasise academic integrity?	Is AI literacy fostered among students so that they understand how to use AI with integrity in assessment? Is there an explicit reference to the extent to which the use of AI is permitted? Is there scope for unauthorised use of AI in the assessment types currently used? Review using the FLOAT framework.	Are alternative, equitable modes of assessment offered? Do students have the opportunity to demonstrate their learning in different ways, i.e., not solely text-based, through practical demonstrations, presentations, video, images, and audio? Are authentic, inclusive assessment methods employed? Is feedback literacy fostered among students so that they understand how to learn from and act upon feedback?	Do assessments invite students to apply their learning to real-world or futures-oriented problems? Is there evidence of values-based or action-oriented assessment approaches?
Reading List / Resources	Are resources available to assist students in learning about good academic practice?	Are permissible AI tools referenced?	Does the reference/resource list include a variety of sources that reflect diverse views and perspectives?	Does the resource list include materials that reflect sustainability perspectives, global challenges, or diverse knowledge traditions.

	Academic Integrity	Aritificial Intelligence (AI)	Inclusive Practice	Education for Sustainable Development (ESD)
IDENTIFY The potential for more explicit consideration of the theme				
Learning Outcomes (LOs)	Is there scope / need for the PLOs to be modified to include the embedding of academic integrity?	Is there scope / need for the LOs to be changed or modified to accommodate AI considerations?	Is there scope / need for the LOs to be changed or modified to accommodate inclusive practice principles? Is there scope / need for the LOs to be changed or modified to incorporate internationalisation of the home curriculum?	Is there scope to embed environmental, social, or economic sustainability-oriented outcomes more explicitly? Could any existing LO be reframed to foreground ethical reasoning or futures thinking?
Learning & Teaching Strategy	Is there scope to refer explicitly to fostering a culture of academic integrity in the L&T strategy, through the modelling of good academic practice?	Is there scope/need to change or modify the L&T strategy to accommodate AI considerations?	Is there scope/need to change or modify the L&T strategy to accommodate inclusive practice principles? Is there scope/need for the L&T strategy to be changed or modified to incorporate internationalisation of the home curriculum?	Is there potential to incorporate more intentionally pedagogies associated with ESD, such as problem-based learning, systems thinking, or community-engaged learning?
Assessment Strategy	Is there scope/need to change or modify the Assessment strategy to ensure the validity of each assessment and that academic integrity is being upheld?	Is there scope/need to change or modify the Assessment strategy to accommodate AI considerations?	Is there scope/need for the Assessment strategy to be changed or modified to accommodate inclusive practice principles? Are alternative forms of assessment considered? Is there a reference to flexibility regarding assignment submission dates? Is there scope/need for the Assessment strategy to be changed or modified to incorporate internationalisation of the home curriculum?	Is there scope to introduce assessments that require students to engage with real-world issues, reflect on their values, or consider the long-term impacts of professional practice in the discipline?

	Academic Integrity	Aritificial Intelligence (AI)	Inclusive Practice	Education for Sustainable Development (ESD)
IDENTIFY The potential for more explicit consideration of the theme				
Reading List / Resources	What additional resources can be identified to support the development of students' ethical academic practice?	Is the list of permissible tools current insofar as possible, within the context of a constantly evolving landscape?	Is there scope to include a wider range of sources that reflect diverse and global views and perspectives?	Is there potential to broaden the resource base to include perspectives from the Global South, indigenous knowledge systems, or sustainability-focused scholarship?

	Academic Integrity	Aritificial Intelligence (AI)	Inclusive Practice	Education for Sustainable Development (ESD)
MODIFY The relevant element(s) of the module descriptor to incorporate any amendments				
Learning Outcomes (LOs)	How might this Learning Outcome be framed?	What might any changes to the LOs look like?	What might any changes to the LOs look like?	What might revised LOs look like if they explicitly addressed sustainability competencies — such as systems thinking, anticipatory thinking, or normative / values reasoning?
Learning & Teaching Strategy	What might any changes to the L&T strategy look like?	What might any changes to the L&T strategy look like?	What might any changes to the L&T strategy look like?	What might a modified L&T strategy look like if ESD principles were more deliberately embedded — for example, through place-based learning, civic engagement, or cross-disciplinary collaboration?
Assessment Strategy	What might any changes to the Assessment strategy look like?	What might any changes to the Assessment strategy look like?	What might any changes to the Assessment strategy look like?	What might changes to the assessment strategy look like if students were asked to demonstrate not just disciplinary knowledge, but their capacity to respond thoughtfully to real-world challenges?
Reading List / Resources	What might an updated resources list look like?	What permissible tools have been identified?	What might any changes to the reading / resources list look like?	What might any changes to the reading / resources list look like?

Appendix 4. Considerations for an Inclusive Curriculum in Developing Module Definition Forms in Academic Module Manager

Introduction to Programme/Module	√ State commitment to inclusive learning. √ Provide clear signposting to supports (e.g., disability services, academic skills). √ Include guidelines for respectful engagement.
Indicative content: Representation in teaching examples	√ Use case studies, examples, and scenarios that reflect a diverse student body and global perspectives, e.g., business case studies from different economic contexts, or healthcare roleplays including linguistic diversity. √ Include content that covers multiple perspectives, theoretical standpoints and contributions by people from multiple cultures and backgrounds (May and Thomas, 2010). √ Include content that facilitates exploration of themes of equality, diversity, inclusivity and cultural relativity. √ Include scholarship from underrepresented groups.
Teaching and learning strategy	√ Provide multiple modes of content delivery: Provide core materials in accessible formats (captioned videos, readable PDFs, screen reader friendly documents. √ Regularly review all case studies for embedded assumptions about language, culture, or norms, and revise them to be more globally inclusive. √ Plan fieldwork and lab activities with accessibility in mind. Provide prelab videos, annotated diagrams, and virtual simulations so students can prepare if they cannot physically attend a preparatory session. √ Adopt culturally responsive teaching practices that validate students' identities and experiences. √ Incorporate inclusive learning and teaching approaches such as: • Problem-Based Learning (PBL) with accessible entry points: Present a complex problem (e.g., environmental policy challenge) with multiple roles and task options so students with different strengths can contribute. • Collaborative, structured group work: Use assigned roles (e.g., facilitator, researcher, summariser) and rotating responsibilities to ensure equal participation and prevent exclusion.
Assessment strategy	√ Foster assessment literacy - Include early, lowstakes opportunities to practise assessment skills. √ Offer choice of assessment format - Allow students to choose between equivalent assessment types, e.g., report, podcast, poster, or essay, where learning outcomes are not tied to a specific format. √ Allow staggered submission windows - Use 48–72hour submission windows rather than fixed deadlines to accommodate employment and caring commitments without requiring individual extensions. √ Use clear rubrics with accessible language. √ Cultivate feedback literacy - Show students how to interpret, apply, and act upon feedback, using annotated exemplars and students' own past work.
Reading and resources lists:	√ Include scholarship from underrepresented groups. √ Review core readings for unintended bias.

Appendix 5. Additional References and Resources Supporting Active and Applied Learning

Team-based Learning

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14. Simkins, S. P., Maier, M. H., & Ruder, P. (2021). Team-based learning (TBL): Putting learning sciences research to work in the economics classroom. *The Journal of economic education*, 52(3), 231-240. https://doi.org/10.1080/00220485.2021.1925188
15. Stein, R. E., Colyer, C. J., & Manning, J. (2016). Student Accountability in Team-Based Learning Classes. Teaching Sociology, 44(1), 28-38.
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Challenge-Based Learning	1. Cruger, K. M. (2018). Applying challenge-based learning in the (feminist) communication classroom: Positioning students as knowledgeable change agents. *Communication Teacher*, 32(2), 87–101. https://doi.org/10.1080/17404622.2017.1372602
Design-Based Learning	1. Chen, C. H., Chiu, C. H. (2016). Employing intergroup competition in multitouch design-based learning to foster student engagement, learning achievement, and creativity. Comput. Educ.10399–113. 2. Ford, C., McNally, D., & Ford, K. (2017). Using design-based research in higher education innovation. *Online Learning* 2150–67

Appendix 6. The TUS Digital Ecosystem: Software for Academic Programmes

Compilation of teaching, learning and assessment tools based on Professor Diana Laurillard's Conversational Framework and ABC Curriculum Design Toolkit

Knowledge Transfer Learning through acquisition of knowledge – e.g. listening to a lecture or podcast, reading from books or websites, and watching demos, videos, and screencasts.	**Knowledge Transfer and Some Interaction** Learning through discussion and investigation for more active student engagement with content – e.g. asking questions, quizzing.	**High Interaction and Engagement** Learning through discussion, practice and production with feedback, interactive – increased student and lecturer interaction.	**Collaborative Learning** Learning through collaboration, investigation, and production with collaborative group work with input from lecturer.
Live Online Lecture Zoom Workplace Microsoft Teams	Quiz Before or After a class Moodle Quiz Vevox Student Response System Learning Activity Management System (LAMS) H5P CitethemRight Moodle Plugin	Discussion in Live Classroom Zoom Workplace Microsoft Teams Vevox	Small Group Discussions between classes Zoom Workplace MS Microsoft Teams Moodle Discussion Forum
Live Online "Chalk and Talk" Zoom Workplace Microsoft Teams	Quiz/Poll Tools in a Live Classroom Moodle Quiz Vevox Student Response System Zoom Workplace Learning Activity Management System (LAMS) Moodle Board	Online discussion between classes Moodle Discussion Forum	Creating Group Outputs between classes MS Microsoft Teams MS One Note Office 365 documents
Recorded Session	Questions and Answers before or after class	Production, reflection, practice, feedback and discussion - Wikis, Blogs, Reflections, Screencasts by Students + Personalised Responses by Faculty Moodle Wiki	Small Group Discussions in a live class

Knowledge Transfer Learning through acquisition of knowledge – e.g. listening to a lecture or podcast, reading from books or websites, and watching demos, videos, and screencasts.	**Knowledge Transfer and Some Interaction** Learning through discussion and investigation for more active student engagement with content – e.g. asking questions, quizzing.	**High Interaction and Engagement** Learning through discussion, practice and production with feedback, interactive – increased student and lecturer interaction.	**Collaborative Learning** Learning through collaboration, investigation, and production with collaborative group work with input from lecturer.
Zoom Workplace Microsoft Teams ScreenPal PowerPoint with audio YouTube Microsoft Stream	Moodle Discussion Forum Moodle Choice Moodle Database Moodle Assignment	Moodle Journal Moodle Student Diary Pro activity Moodle Assignment Microsoft OneNote Class Notebook TurnItIn ScreenPal Moodle Board Labster	Zoom Workplace -Breakout Rooms MS Microsoft Teams
Creation of Non-Interactive Content – Video, Notes, Images, Handbooks Zoom Workplace ScreenPal Moodle Book MS OneNote Class Notebook Microsoft Sway Articulate Rise OBS Studio TUS Pressbooks	Question and Answer session in Live Classroom Zoom Workplace MS Meeting	Personalised Formative and Summative Assessment Feedback (promoting academic integrity) TurnitIn Moodle Assignment Moodle Quiz ScreenPal Vevox MS OneNote Class Notebook MS Assignment/Quiz/Forms Moodle H5P activities	Creating Group Outputs within a live class Zoom Workplace MS Microsoft Teams Learning Activity Management System (LAMS) Wikis, Blogs + Peer Evaluation Moodle Discussion Forum Moodle Wiki Moodle Database Moodle Workshop MS OneNote Class Notebook
Existing Online Resources + Open Educational Resources • Library including OER Libguide • National Forum (HEA) • Khan Academy • MERLOT.org	Creating Interactive Content i.e. student responds while engaging with content Moodle H5P activities Moodle Quiz Moodle SCORM Vevox SRS	One to One or Small Group sessions/ Project Supervision Zoom Workplace Microsoft Teams Microsoft OneNote Class Notebook MS Microsoft Teams	Facilitated Live Whole Class Discussion Zoom Workplace MS Microsoft Teams

Knowledge Transfer Learning through acquisition of knowledge – e.g. listening to a lecture or podcast, reading from books or websites, and watching demos, videos, and screencasts.	**Knowledge Transfer and Some Interaction** Learning through discussion and investigation for more active student engagement with content – e.g. asking questions, quizzing.	**High Interaction and Engagement** Learning through discussion, practice and production with feedback, interactive – increased student and lecturer interaction.	**Collaborative Learning** Learning through collaboration, investigation, and production with collaborative group work with input from lecturer.
• Lynda.com • TED talks • OER COMMONS • CitethemRight • OBF (Open Badge Factory)	LAMS Articulate Rise/Storyline Adobe Suite	–	–
–	Workbooks / Lab books MS OneNote Class Notebook	Roleplays/Simulations Zoom Workplace Microsoft Teams Labster	Facilitating Whole Class Discussion between classes Zoom Workplace Moodle Discussion Forum MS Microsoft Teams
–	E-Portfolios Student Diary Pro (Moodle) MS OneNote Class Notebook	E-Portfolios /Placement portfolios Student Diary Pro (Moodle) MS OneNote Class Notebook	Group Projects MS Microsoft Teams channels/breakout rooms Moodle Groups used with other tools e.g. forum, chat, wiki MS One Note Class Notebook Office 365 shared documents
–	–	Student Presentations + Peer Discussion Zoom Workplace Microsoft Teams Voice Thread	Student Presentations + Peer Discussion Zoom Workplace Microsoft Teams VoiceThread

Software used to support students with Specific Learning Difficulties (SLD)

- **Claroread**: software to support students with literacy difficulties. Features include text to speech, spell-checkers, word prediction, screen masking, converts written notes to audio, mindmapper, etc. Used by some students as alternative to human reader for exams.
- **Inspiration**: mind mapping software used to assist with organising information such as study notes, assignments, and exams.
- **Dragon Naturally Speaking**: speech to text software, used when student has a difficulty with typing.
- **Spellex**: medical spellchecker software, used by students in Veterinary Nursing.
- **Genio (formerly Glean)**: audio notetaking software, access to students as assigned.
- **Supernova**: application for screen enlargement for students with visual impairment.
- **Readit**: software to be used with high-definition camera in Assistive Technology.

Appendix 7 (A). Considerations for Authentic Assessment Design

1	**Assessment aligns with programme level learning outcomes.**	
2	**Assessment focuses on meaningful student engagement, not just real-world replication:**	√ Build in student choice, opportunities for creativity, and tasks that connect with students' interests or identities.
3	**Assessment builds tasks that mirror realistic complexity:**	√ Frame tasks around real-world scenarios, case studies, design challenges, or community-based projects.
4	**Assessment ensures inclusivity and relevance for diverse learners:**	√ Provide multiple pathways or modalities for completing tasks. √ Consider cultural, linguistic, and accessibility factors.
5	**Digital technologies are integrated strategically:**	√ Use digital tools not only in task design but also in feedback, collaboration, and evaluation. Examples include simulations, multimedia submissions, collaborative platforms, and digital portfolios.
6	**Clear criteria, transparency, and scaffolding are provided:**	√ Use rubrics with transparent criteria. √ Offer models, exemplars, and staged submissions. √ Support students with tutorials, guidance notes, or feedback checkpoints.
7	**Feedback loops and opportunities for revision are embedded:**	√ Include formative feedback opportunities. √ Design tasks that allow resubmission, draft stages, peer review, or reflection.
8	**Reflection and metacognition are fostered:**	√ Incorporate reflective journals, process commentaries, learning statements, or video reflections.

Appendix 7 (B). Authentic Assessment Task Checklist

Authentic Assessment Task Checklist
√ Task relevance: The task is meaningful in the eye of the student, and relevant to their future aspirations;
√ Ownership: students will have a degree of ownership of/within the task. For example, they may negotiate the subject focus of the task, or have freedom in choosing the format, tools used or assessment criteria;
√ Task structure: typically involves tasks with open structures or open-ended solutions, which require the student to draw knowledge and skills from multiple sources;
√ Environment: often takes place in a similar or simulated environment to the real-world setting;
√ Collaboration: task typically involves collaboration similar to that experienced by practitioners, professionals, or experts in the field;
√ Authentic graduate task: the development of knowledge, skills, attributes, products or performance that could be, or is, recognised as authentic by a practitioner, professional, or expert in the field;
√ Synthesis of skills, knowledge, attributes from the range of skills, knowledge and attributes that they have acquired;
√ Non-traditional formats: Authentic assessment is usually presented via more non-traditional assessment methods (e.g. beyond exams and MCQs) and at different assessment points (versus a one-off);
√ Metacognition: elements of self-and peer-review as an explicit part of the assessment process.


TUS