Report of the Review Panel to the Teaching Council following a review of an Initial Teacher Education programme

Name of HEI: **Maynooth University**

Name of Programme: **Bachelor of Science with Education +Professional Master of Education**

Date: **31 August 2022**

Contents

Programme Overview

This report relates to the review of the following programmes provided by Maynooth University

Bachelor of Science with Education +Professional Master of Education, hereinafter referred to as 'the programme'.

Background

Céim: Standards for Initial Teacher Education sets out the standards which programmes of initial teacher education in Ireland must meet in order to gain accreditation from the Teaching Council. It is also a benchmark for anybody seeking to register as a teacher in Ireland.

The Teaching Council's *Procedures for the Professional Accreditation of Programmes of Initial Teacher Education* (hereinafter referred to as the *Procedures*) sets out the process by which programmes are reviewed.

Maynooth University submitted a completed pro forma, toolkits and appendices which mapped the programme against each of the Standards outlined in *Céim: Standards for Initial Teacher Education*. The programme was reviewed by the Review Panel following the *Procedures.*

Particular requirements for post-primary programmes

In November 2020, the Council published *The Teaching Council Registration Curricular Subject Requirements (Post-Primary),* which set out the Council's revised subject criteria requirements for approved curricular subjects. The requirements may be met through studies incorporated into a concurrent programme of initial teacher education or may be met through undergraduate studies prior to completing a consecutive programme of initial teacher education. This also guides providers of post-primary consecutive programmes in determining suitability of entrants, outlining which curricular subjects entrants can ultimately be registered to teach, as well as matching students to appropriate methodology modules.

The Review Process

The review of **Bachelor of Science with Education +Professional Master of Education** at Maynooth University took place between March 2022 and August 2022 in accordance with the Council's *Procedures for the Professional Accreditation of Programmes of Initial Teacher Education*.

Notification	The Council notified Maynooth University of its intention to review the **Bachelor of Science with Education +Professional Master of Education** on 11 October 2021.
Preliminary Meeting	A preliminary meeting was held between the Council executive staff and Maynooth University on 4 November 2021 to provide an overview of the submission documentation and answer queries from Maynooth University.
Submission	Maynooth University submitted the proforma and supporting documentation for the **Bachelor of Science with Education +Professional Master of Education** on 11 March 2022.
Desk-based Review	A desk-based review was conducted by the Council staff and a letter requesting clarifications was sent to Maynooth University on 25 March 2022. Maynooth University submitted their response on 4 April 2022.
Appointment of Review Panel	The process was formally initiated when the Review Panel (hereinafter referred to as 'the panel') was appointed by the Teaching Council's acting director, with Dr Mary Fleming as Chairperson and Prof. Jim Gleeson and Mr. Milo Walsh as panel members. The panel was briefed by Teaching Council staff.
Rapporteur	The review panel was supported by Mary Condon in their role as a rapporteur. The Rapporteur's functions included liaison with Maynooth University, maintaining records of meetings, and drafting and finalising the panel's report in conjunction with the panel Chairperson. The panel was also supported in its deliberations by external subject experts and by the Director of the Teaching Council and their executive staff nominees.

Review panel meeting 1	The panel met on 19 April 2022 to consider the submission. They requested clarifications from Maynooth University on 11 May 2022. Maynooth University responded to this request on 1 June 2022.
Engagement with the HEI	The Panel Chair and Rapporteur held a pre-meet with the Head of School of Education (Acting) on 17 May 2022 to discuss the personnel the Panel wished to meet and to arrange a schedule for the online meeting The full Review Panel held a virtual meeting with Maynooth University on 7 June 2022. This was also attended by the Rapporteur and the Acting Head of Initial Teacher Education, who attended in an observatory capacity. The following attended on behalf of the university: • Dean of the Faculty of Social Science • Acting Head of Education • PME 2 Programme Leader • BSc Programme Leader • School Placement Officer • Administrative Officer • Placement Tutor • Methodologist and Treoraí
Review panel meeting 2	The panel met to consider these clarifications and agree recommendations on 19 July 2022.
Reporting	The report was drafted and issued to the HEI for the 30-day feedback period. It was finalised when the final response was received from Maynooth University.
Education Committee	The Chair will present the report to the Education Committee on 13 September 2022. They may decide to; accredit the programme, accredit the programme with requirements or refuse accreditation

Overall Findings

The Panel commends the quality of the submission and the professional and deep engagement of the Maynooth University programme teams with the process.

The documentation was excellently presented with clear and coherent links to modules, design structure and school placement guidelines.

Documentation and the subsequent discussions at the online meeting reflected deep engagement and considered thinking on the CÉIM standards. Consequently, the two Maynooth University Post Primary Initial Teacher Education programmes represent a creative response to the review and accreditation process and demonstrate clear alignment with the student teacher's trajectory of learning and professional development as reflective practitioners.

School placement within the programmes is very well developed and structured. The placement handbooks for students, tutors, and school personnel (Treoraithe) and other personnel provided focus and clarity on each stakeholder's requirements and responsibilities.

The non-credit ED101 module in Year 1 BSc. Ed—PME is very useful to students at the start of their professional teacher identity journey. It also introduces the Dept of Education's ethos and operations, practices, and expectations early in programme as well as key staff.

The development of Taisce as a core activity supports and enables the student teacher to build an appreciation of reflective practice as a lifelong professional learning endeavour. This is further emphasised with the creation of an individual professional growth plan in the final year that links to future professional learning and development.

Programme Design

	Comment	Standard addressed?
1.1.1 The Programme	The Programme received academic accreditation in November 2021 prior to being submitted to the Teaching Council for professional accreditation and is in line with the Council's Registration Regulations 2016.	Yes
1.1.2 Conceptual Framework	The programme is supported by a clearly defined conceptual framework. *"Teaching conceived as an ethical-relational practice therefore allows us to consider the multidimensional nature of teaching: where it happens, with whom, and for what purpose (Biesta 2017). It enables us to address not only the complexity of teaching beyond instrumentalist frameworks, but also how it participates in enabling personal and social change through creating alternative forms of relationality."* In the application, Maynooth University demonstrated how the conceptual framework is developed in the context of the provider's mission and ethos, how it is informed by research, the Council's Policy on the Continuum of Teacher Education the core idea that being and becoming a teacher is a lifelong process involving knowledge and skills as well as the development of teacher voice and agency and a commitment to the needs of all learners and the Code of Professional Conduct for Teachers, and how it identifies the HEI's principles, beliefs and values about education, teacher education, and teaching and learning. *"Our ethos is strongly rooted in the ability of education to shape the future, at the level of both society and the individual. In this, our ethos is not merely aspirational but practical and thoroughly supported by educational research that focuses on the transformative potential of teaching as an ethical-relational activity."* *"Our conceptual framework supports the four pillars of the Code of Conduct (respect, care, trust and integrity), which the Teaching Council identifies in terms of teachers' relationships to students, colleagues, parents and society at large (2016, p. 6). To this, we would add that an ethical-relational concept of teaching also includes a relationship to oneself, in terms of developing one's own professional identity."*	Yes

The application demonstrated how the conceptual framework provides a rationale for the model of ITE which has been adopted, how it enables student teachers while on placement to demonstrate the link between the sites of practice (HEI and school).
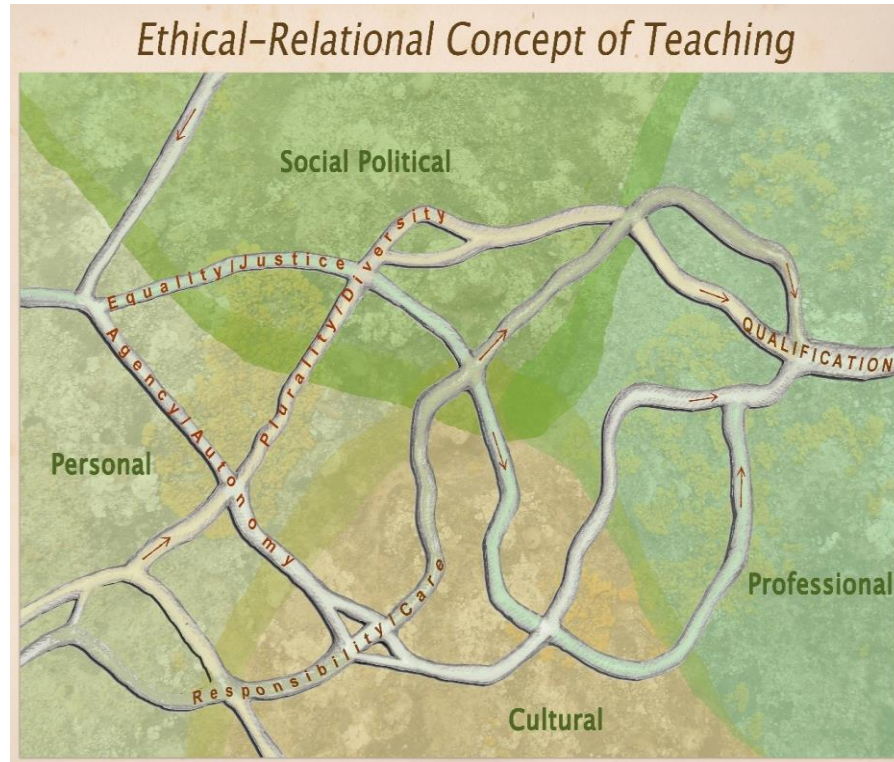
Appendix 7

"*The key concepts of our framework within the four domains of teaching provide a strong rationale for the scope and design of our BSc Ed programme, which ends in a 5th year of study (Year 2 of the PME). The diagram in Appendix 7, clearly illustrates several pathways that intersect, with each identified concept informing the others. These pathways mirror not only the BSc Ed + PME programmes, but also capture the individual journeys that students can take in becoming a teacher*"

The submission reflects that school placement is the fulcrum of the continuum of teacher education. It also shows how key themes are revisited over the programme. It demonstrates how the professional studies aspect of the programme gives student teachers sufficient opportunities to actively learn from practising teachers about relevant and innovative methodologies, appropriate to their practice.

"*In the revised design, students engage more in teaching rather than being passive observers of teaching. They either collect or design artefacts of teaching, planning and preparation, learning*

	environment and professional responsibilities at school for their placement portfolio. These four competency areas are strongly linked to the four domains of our framework. These links are revisited through the professional dialogues between students and their placement tutors."	
1.1.3 Programme Aims	The application clearly defines the aims of the programme, demonstrating where the aims are closely aligned with the conceptual framework and are reflected in specific learning outcomes.	Yes
	The programme aims are demonstrated in learning outcomes where	
	"the student will:	
	• *Demonstrate a high level of subject-content knowledge and analytical abilities in two STEM subjects*	
	• *Will develop a coherent understanding of the pedagogical content knowledge required to teach their chosen subjects in second-level schools, to a variety of classes of diverse abilities and in a range of educational contexts*	
	• *Teach, both through their school placements and on-campus modules, in a professional manner facilitating quality learning with appropriate regard to the code of conduct for teachers.*	
	• *Demonstrate a comprehensive understanding of foundation studies underpinning their work with specific emphasis on social, political, historical, psychological, sociological, philosophical and cultural perspectives*	
	• *Develop a diverse set of attitudes, skills and knowledge that will prepare them for a career in teaching"*	
	The application demonstrates how the programme caters for curriculum development, to include the learning outcomes-based curricula and national priorities.	
	"The programme caters for curriculum development through inclusion of new and revised modules considering the current national priorities and the recent outcomes-based Junior Cycle curricula."	
	The application demonstrates how the programme aims will enable newly qualified teachers to facilitate quality teaching and learning for all pupils.	
	"The programme considers quality teaching and learning that caters for the learning of all pupils as part of its core ethos" *The programme fosters student teachers' agency and mind-set to be open to professional growth and learning over the course of their*	

	careers, to reflect on their own professional learning and that of their pupils, and to support their pupils in achieving their full potential. *"Students have the opportunity for application and reflection during their periods of school placement. The largest block of independent teaching occurs during school placement in year 5. This prepares students to practise in increasingly autonomous manners in preparation for a career in teaching."*	
1.1.4 Programme Duration & Balance	The review process determined that the submission demonstrated that the concurrent programme meets the criterion of a minimum of four years duration, and how the models of teaching, learning and assessment set out in the conceptual framework are evident in the programme structure. The BSc Ed is a 4-year programme consisting of 180 credits in degree subjects and 60 credits in education. BSc Ed graduates join Year 2 of the PME where they complete a further 60 credits, making them eligible for registration with the Teaching Council. *"The BSc Ed and PME programmes have been designed to ensure alignment, coherence, and balance for BSc Ed students joining year 2 of the PME."* *"All areas of study are relevant to students' future work as teachers and are integrated through the design of our Conceptual Framework"* *"The programme facilitates student teachers' personal development, their growth and wellbeing into their professional role, enabling them to become responsible, trustworthy and reflective practitioners"*	Yes
1.1.6 Integration and Diversity of Programme Content	Maynooth University have demonstrated that foundation studies are integrated into the programme in a way that is meaningful for student teachers and their practice; that the programme design follows a spiral learning approach, and that the programme allows student teachers to experience a variety of teaching, learning and assessment modes. *"Foundation Studies are pivotal to the very way students are encouraged to think about, reflect on and engage with their professional development as teachers."* *"A key element to our approach is the spiral curriculum, which introduces, works with, and revisits key concepts and topics across the duration of the programme."*	Yes

	"Our placement model also encourages a spiral approach: enabling students to explore ideas in placement and use school experiences to inform their conceptual understanding." *"The programme is delivered primarily through seminars, tutorials, and small groups, with some large-group formats. We also offer blended learning environments that enable students to develop novel approaches to digital learning in their own school contexts."*	
Aptitude test	Maynooth University completed an 'Aptitude test' declaration form, confirming that the programme design allows for the provision of 'aptitude tests' for teachers who have qualified outside of the State.	Yes
1.1.7 Required Areas of Study	The review process determined that the submission demonstrated how the Foundation Studies, Professional Studies & School Placement elements of the programme meet the requirements of this standard. Foundation Studies The programme provides research informed insights to support student teachers' understanding of the practices of teaching, learning and assessment for all pupils, *"The foundation studies component of the programme introduces students to key disciplines of education, namely history of education, psychology of education, sociology of education, and philosophy of education. Its purpose is to support and enhance students' reflections in their journey towards becoming teachers and to think critically and carefully about key concepts (such as democracy, diversity, equality, social justice etc.) and to underpin their professional practice."* The programme provides the basis of a strong professional ethic in teaching and learning, including curriculum studies, the history and policy of education, philosophy of education, psychology of education & sociology of education. *"Educational research informs not just the curriculum content in Foundations Studies, but also the types of pedagogical approaches and assessment practices. A variety of pedagogical approaches are used."* *"Foundation Studies also provide the basis for a strong professional ethic in teaching and learning. It is designed to challenge students' assumptions and beliefs, and to help them articulate their values in education."*	Yes

The programme, enhances students' understanding of the Irish education system, locates it in context and enables students to think critically about it.

Professional Studies

Maynooth University demonstrates that the Professional Studies elements of the programme develop the pedagogical expertise of student teachers, including subject specific pedagogical content knowledge as evidenced in their Professional Studies modules.

"During the professional studies element of the programme, we focus on providing multiple opportunities in each year of the programme for these student teachers to transform that subject knowledge into knowledge for teaching, to develop their understanding of the theoretical underpinnings of their practice, and to communicate clearly and coherently with others."

School Placement

Maynooth University demonstrated how the school placement provides opportunities for student teachers to experience a high support/high challenge model of placement as;

"School placement is the fulcrum of the programme of initial teacher education. Student teachers are introduced to placement early in the programme with the objective of supporting them to link sites of practice from the outset. Student teachers are scaffolded in their professional growth by operating a high challenge-high support model of school placement."

The student teacher will learn to plan for, and undertake, class teaching, learning and assessment using a wide range of strategies in a diversity of class settings and subject levels, establish classroom management strategies that support suitable and effective learning for all pupils and that promote and maintain positive behaviour.

"All placements begin with periods of structured and guided observation both in student teachers' own subjects and in cross-curricular subjects. Observation remains a core feature of all placements and this often provides a context for increased use of team-teaching models which are supported strongly within the programme. It also ensures that student teachers have opportunities to observe and support teaching and learning in varied classroom contexts and levels."

"The student teacher will observe experienced teachers teaching, be involved in a wide range of school activities and reflect critically on their practice and programme of study."

"Student teachers report the value of observing experienced teachers in subjects beyond their own in terms of methodologies, pedagogies and classroom management style"

They will both inform and shape each other, receive, and respond to feedback on their practice, identify areas for further professional learning for Droichead.

"Constructive and timely feedback is central to all elements of the programme, including School placement"

"Their Taisce and Professional Growth Plan (EDM602) provides visibility of their professional growth and provides a starting point and springboard for their learning on the next stage of the teacher education continuum in Droichead."

Core elements of programmes of ITE
The review process determined that the submission demonstrated that the following elements underpin all aspects of the programme.

1.Inclusive Education

"The BSc Ed. + PME programme responds in pedagogic, universal design for learning (UDL) and ethical-relational ways to this standard through its Conceptual Framework and across its module structure."

"Our programme provides for the learning needs of all our students and commits to pedagogic principles in the universal design for learning framework, which prioritise multi-modal means of (a) engagement, (b) representation and (c) action/expression. Together these recognise the necessity to provide varying ways of engaging with and presenting material and lesson activities"

2. Global Citizenship Education

"The core element of Global Citizenship Education permeates all aspects of the programme, informed as it is by the intersection of the social/political, cultural, professional and personal dimensions of the Conceptual Framework"

"The ethical-relational concept of teaching upon which our programme is based ensures a thorough integration of principles such

as care and responsibility, both for self and others, into teaching practice itself."

3. <u>Professional Relationships and working with parents</u>

"*Teaching as a relational endeavour is a key aspect of our conceptual framework. The role of teacher requires a capacity to engage with pupils in the classroom and beyond, with the variety of adults who are connected to the pupils, and with the school and the wider community in different ways.*"

4. <u>Professional identity and agency</u>

"*We support our student teachers to develop their emerging professional identity in their learning journey in numerous ways by giving them tools they can avail of in the future stages of their teaching careers.*"

and

"*strong theoretical understanding is the basis for an autonomous professional, who is able to respond to complex educational problems in their diverse school contexts.*"

5. <u>Creativity and Reflective practice</u>

"*Fostering creativity among student teachers lies at the heart of this programme's design and enactment. The Department's culture is one of fostering the mindfulness and wellbeing of students, with creativity inherent in our ways of working and being.*"

"*Creativity is a recurrent word in the School Placement Appraisal where excellent teaching and assessment is characterised by "creativity, innovation, resourcefulness, and originality" and where "pupils' interest in the subject [is stimulated] through a variety of creative strategies*"

6<u>. Literacy and Numeracy</u>

"*The programme design ensures that student teachers are afforded opportunities to enhance their own literacy and numeracy and are required to demonstrate an acceptable level of proficiency in literacy and numeracy*"

"*Students are required to demonstrate their competence in teaching and assessing literacy and numeracy appropriate to their curricular/subject area(s) through lesson planning.*"

	7. <u>Digital Skills</u> *"The development of digital literacy is paramount throughout the programme. While technology is deliberately taught as a pedagogical approach in the Education modules, lecturers also model best and innovative practice by incorporating digital technologies into their pedagogical and assessment practices within modules (e.g. wordle, mentimeter, padlet, google docs)."* *"Students understanding and competency in digital literacy is expanded and enhanced through engagement with relevant research and exploration of the European Framework for The Digital Competence for Educators as well as the Irish Digital Learning Framework. It also provides an opportunity to explore the use of digital technologies for teaching, learning and assessment through their reflection on the current use of technology in their placement schools and its relation to the literature and research on best practice."*	
Post-primary: Curricular subject criteria registration requirements	The programme is Level 8 on the National Framework of Qualifications (NFQ) with a minimum pass result in all examinations pertinent to the subjects of Biology, Physics, Chemistry, Mathematics, Applied Mathematics and Computer Science. Each subject meets the minimum subject specific requirements for registration from January 2023 and meet the minimum requirement of 60 ECTS each.	Yes
	The review process determined that the submission demonstrated that subject discipline components include subject specific curricular studies and pedagogies (methodologies). *"Subject methods modules enable student teachers to develop an understanding of the theoretical underpinnings of active approaches to teaching and learning and their application to their practice in real contexts."*	Yes
1.1.8 Learning and Assessment Strategies	Maynooth University demonstrated how the principles, beliefs, and values about teaching, learning and assessment which are set out in the conceptual framework are evident in the teaching, learning and assessment modes used in the programme. It demonstrated the relationship (constructive alignment) between the learning opportunities and the assessment criteria which student teachers are expected to meet, and how the assessment processes and procedures are coherent and integrated using a variety of assessment modes.	Yes

	"The BSc Ed + PME programmes adopt a number of innovative learning and assessment strategies that demonstrate our commitment to developing sound fundamentals of teaching while, at the same time, honing the critical and reflective capacities of our student teachers."	

Programme Resourcing

	Comment	Standard addressed Yes/No
1.2.2 Staffing	The review process determined that the submission demonstrated that the programme meets this standard by providing: • programme staff qualifications and experience • evidence that from September 2022 at least 50% of all School Placement Tutors are registered as teachers with the Teaching Council, with 69% of their existing placement tutors registered with the Teaching Council. • the staff distribution mechanism the College has in place to show that prior to qualification, while on school placement, a student teacher will be summatively assessed at least once by a registered teacher. • the student:staff ratio of 12.7:1 Maynooth University demonstrated the staff development policies that are in place to ensure that staff continue to enhance their knowledge and expertise including that relating to reflective practice, research, curriculum development, inclusive education, and professional development. The University's Continuing Professional Development Policy outlines their commitment.	Yes
1.2.3 Facilities	Maynooth University demonstrated that appropriate facilities are available to support research, teaching, and learning, providing the following: libraries, library supports for students with disabilities, digital technology resources, sports and art facilities, science labs and microteaching labs	Yes
1.2.4 Student Support and Guidance Systems	The review process determined that the submission demonstrated that the provisions are in place for the personal and social development and pastoral care of student teachers. Maynooth University has a wide range of student supports and services. The Maynooth University Writing Centre	Yes

	The Student Counselling Service The Student Health Centre The Student Budgeting Advice Service The Student Support Officer Crèche The Sports Office The Maynooth University Access Office Maynooth University have demonstrated how a student teacher might transfer to an alternative programme, where feasible, and to carry credits in so doing, with due regard to the exit award arrangements already in place in the HEIs. *"There are multiple exit routes from the Education component of the BSc.Ed, allowing students to continue with their double honours Science/Maths/Computer Science degree without an education component.* *They will still graduate with their 4-year 240 credit BSc.Ed at the end of 4 years. Moreover, opportunities are provided for BSc. students to transfer into year 2 of the BSc.Ed if places become available. This is a competitive, interview-based process."*	
1.2.5 Communication and Decision-making Structures	The review process determined that the submission demonstrated the structures that are in place to facilitate the participation of staff and students in relevant deliberation and decision-making processes. *"The Department regularly engages with students in decision-making processes related to departmental decisions regarding programme design and revisions."*	Yes
1.2.6 Financial Resources	Maynooth University have demonstrated that the programme is adequately resourced to ensure that programme aims are met through student fee income and state grants.	Yes

School Placement

	Comment	Standard addressed?
1.3.1 A Shared Vision for School Placement	The Maynooth University school placement model supports the shared vision for school placement. The review process determined that the submission demonstrated that student teachers experience a supportive model of placement which facilitates professional conversational engagement between all partners.	Yes

	"Throughout this high-challenge, high-support journey of professional growth and development, there are increasing expectations placed on student teachers in terms of the number and range of classes they teach, the year levels they teach and the non-teaching activities their undertake in schools."	
1.3.2 Duration	The review process determined that the submission demonstrated that the duration of the school placement is in compliance with the Teaching Council's requirements and includes both school-based and HEI-directed activities, thus meeting the requirements of this standard.	Yes
1.3.3 Elements of School Placement	The review process determined that the submission demonstrated that the school-based and HEI-directed activities included as part of the placement experience are as outlined in the Guidelines on School Placement and regarding the stage the student teacher is at on the programme.	Yes
1.3.4 School Placement Models	The review process determined that the submission demonstrated that school placement models are developed using a partnership approach, whereby the HEI and schools actively collaborate in the organisation of the school placement. *"Where the student teacher experiences difficulty sourcing a placement, the School Placement Officer or wider departmental team reaches out to schools and networks to provide additional support securing a placement."*	Yes
1.3.5 Securing of Placement	The review process determined that the submission demonstrated that Maynooth University assumes overall responsibility for the placement of student teachers.	Yes
1.3.6 Diversity of Placement Settings	The review process determined that the submission demonstrated that the programme meets the requirement of a minimum of two placement settings incorporating a variety of teaching situations, class levels and school contexts, including Irish medium schools.	Yes

	“*Various categories of school types (e.g. patronage types, coeducational/single-sex, fee-paying/public, DEIS/non-DEIS) are explored with students to ensure a diversity of experiences across placements within the programme.*”	
1.3.7 Taisce in School Placement	The review process determined that the submission provided evidence of the approaches Maynooth University is utilising to enable the student teacher to demonstrate, using their Taisce, • an understanding of inclusive education as applicable to that context • an understanding of working with parents	Yes
1.3.8 Research in School Placement	Maynooth University demonstrated that the student teacher engages in research on their own practice that demonstrates the connection between the sites of practice during at least one school placement module. “*Our students support schools in terms of advancing school-based research on priority areas, including through their Professional Project.*”	Yes
1.3.9 School Placement: Evaluation and Assessment	The review process determined that the submission demonstrated that all student teachers are supported and assessed by two or more Placement Tutors, and at least once by a registered teacher. It outlined the teaching enrichment and mentoring support offered to students who fail a module of school placement. “*The Department adopts a pre-emptive and proactive approach in terms of student teachers experiencing difficulty on school placement. Identifying such student teachers at an early stage is central to the induction processes for tutors and partner schools are encouraged to share any concerns as soon as possible with the School Placement Officer.*”	Yes

Recommendation

Having regard to the documentation that was submitted, the panel adjudges that the programme meets the standards set down by the Teaching Council in *Céim: Standards* for Initial Teacher Education and in The Teaching Council Registration Curricular Subject Requirements (Post-Primary).

Accordingly, it recommends to the Teaching Council that the programme be granted accreditation.

Appendix 1 - Review Panel Membership

Chair
Dr Mary Fleming

Dr Mary Fleming Emeritus Senior Lecturer in NUI Galway. She was Head of the School of Education, NUI Galway from 2013-2016 and member of the Teaching Council 2016-2018. As Director Teacher Education within the School of Education from 2012, she had primary responsibility for the development and accreditation of Initial Teacher Education (ITE) Programmes and was academic Director of the Professional Master of Education. Mary lectured and taught modules in the areas of Leadership and Policy development, Curriculum Studies, and Professional Practice. Her research interest areas are concerned with the dynamics of teaching and learning within classrooms, leading learning and policy developments within the system and leadership practices within educational contexts.

Panel Member
Professor Jim Gleeson

Jim Gleeson was a teacher in the Vocational Education sector and has worked on various curriculum development and evaluation projects. He worked in teacher education at Thomond College of Education/University of Limerick (1981-2011). Jim was an IUA nominee on the Teaching Council from 2005-2012. He was Professor of Identity and Curriculum at Australian Catholic University, Brisbane, from 2013-2018, and he is currently an Adjunct Professor at the Institute of Education, Dublin City University. Jim's main research interests include curriculum policy and practice; teacher professionalism and development; faith-based education.

Panel Member
Mr Milo Walsh

Mr Walsh is the former assistant Principal CBS Wexford. Member of Teaching council 2005-2016 (Investigative/Disciplinary/Education Committee). Member of Teaching Council executive 2012-2016. Chair of finance committee Teaching Council 2012-2016.School Development Planning   Co-ordinator Dept. of Education and science 2007-2011.INTO Education Committee member 1996-2014.Chairperson INTO Education Committee 2005-2009.

Appendix 2 - Teaching Council Registration: Curricular Subject Requirements (Post-primary) Effective for registration on or after 1 January 2023

Biology

In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of BIOLOGY an applicant must meet all of the following criteria:

1. (a) Applicants must hold a degree-level qualification, with Biology studied up to and including third-year level or higher (or modular equivalent).

(b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass result in all examinations pertinent to the subject of Biology.

(c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Biology comprising at least 60 ECTS credits (or equivalent).

2. The study of Biology during the qualification must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Biology syllabus/specification to the highest level in post- primary education (see www.curriculumonline.ie).

To meet this requirement the degree must include the study of at least four of the following areas:

Essential areas of study

(a) Botany

(b) Plant Anatomy/Physiology

(c) Ecology

(d) Microbiology

(e) Zoology

(f) Mammalian Anatomy/ Physiology

(g) Biochemistry

(h) Genetics

3. Laboratory/practical work must be completed in the course of the degree.

Applied Mathematics

In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of Applied Mathematics an applicant must meet all of the following criteria:

1. (a) Applicants must hold a degree-level qualification, with Applied Mathematics studied up to and including third-year level or higher (or modular equivalent).

(b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass result in all examinations pertinent to the subject of Applied Mathematics.

(c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Applied Mathematics comprising at least 60 ECTS credits (or equivalent).

2. The study of Applied Mathematics during the qualification must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Applied Mathematics syllabus/specification to the highest level in post- primary education (see www.curriculumonline.ie).

The study must include all of the following Essential Areas of study

a) Mechanics

b) Discrete Mathematics

c) Differential and Graph Theory

d) Geometry

e) Analysis

f) Algebra The remaining ECTS may be from the following Optional Areas of study

g) Dynamical Systems and Chaos

h) Numerical Analysis or Computational Mathematics or Computational Modelling

i) History or Philosophy of Applied Mathematics, Mechanics, Mathematics or Science

j) Mathematical Modelling

k) Mathematical Biology

l) Financial Mathematics

m) Population Dynamics

n) Environmental Modelling

o) Probability and Statistics

p) Operations research

Chemistry

In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of Chemistry an applicant must meet all of the following criteria:

1. (a) Applicants must hold a degree-level qualification, with Chemistry studied up to and including third-year level or higher (or modular equivalent).

(b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass result in all examinations pertinent to the subject of Chemistry.

(c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Chemistry comprising at least 60 ECTS credits (or equivalent).

2. The study of Chemistry during the qualification must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Chemistry syllabus/specification to the highest level in post- primary education (see www.curriculumonline.ie).

To meet this requirement the degree must include the study of modules in all of the following areas:

Essential Areas

a) Organic Chemistry

b) Inorganic Chemistry

c) Physical Chemistry The remaining ECTS credits may be drawn from the following areas:

d) Analytical Chemistry

e) Environmental Chemistry

f) Pharmaceutical/Biopharmaceutical Chemistry

g) Industrial Chemistry

3. Laboratory/practical work must be completed in the course of the degree

Computer Science

In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of Computer Science an applicant must meet all of the following criteria:

1. (a) Applicants must hold a degree-level qualification, with Computer Science studied up to and including third-year level or higher (or modular equivalent).

(b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass result in all examinations pertinent to the subject of Computer Science.

(c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Computer Science comprising at least 60 ECTS credits (or equivalent).

2. The study of Computer Science during the qualification must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Computer Science syllabus/specification to the highest level in post- primary education (see www.curriculumonline.ie).

To meet this requirement the degree must include the study of modules in all of the following areas:

Essential areas:

1) Software Engineering and Project Management (may include software design and development systems analysis, design process, testing)

2) Programming (including algorithms and data structures)

3) Computer Systems (including hardware or architecture) Optional areas: The study must also include a minimum of 2 of the following areas:

4) Web development

5) Animation/ games/ multimedia development

6) App development

7) Robotics

8) Embedded systems

9) Modelling/ simulation

10) Data analysis

11) Databases

12) Machine learning/AI

Practical assignment work must be completed throughout the degree course (e.g., programming assignments)

Mathematics

In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of Mathematics an applicant must meet all of the following criteria:

1. (a) Applicants must hold a degree-level qualification, with Mathematics studied up to and including third-year level or higher (or modular equivalent).

(b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass result in all examinations pertinent to the subject of Mathematics.

(c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Mathematics comprising at least 60 ECTS credits (or equivalent).

2. The study of Mathematics during the qualification must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Mathematics syllabus/specification to the highest level in post- primary education (see www.curriculumonline.ie).

To meet this requirement the degree must include the study of all of the following Essential areas of study

a) Analysis (must include a module or modules in multi variable calculus)

b) Algebra (must include a module or modules in linear Algebra)

c) Geometry (must include a module or modules in Euclidean and Non-Euclidean Geometry)

d) Probability

e) Statistics (must include a module or modules in Statistical Inference) The remaining credits (or equivalent) may be in any of the above essential areas, or be drawn from the following optional areas: Optional areas of study

f) Dynamical Systems and Chaos

g) Calculus of Variations

h) Numerical Analysis or Computational Mathematics

i) Mathematical Modelling

j) Discrete Mathematics

k) History or Philosophy of Mathematics

l) Mathematical Logic

m) Set Theory and Cardinality

Physics

In order to meet the registration requirements, set down in the Teaching Council [Registration] Regulations in respect of the curricular subject of Physics an applicant must meet all of the following criteria:

1. (a) Applicants must hold a degree-level qualification, with Physics studied up to and including third-year level or higher (or modular equivalent).

(b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass result in all examinations pertinent to the subject of Physics.

(c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Physics comprising at least 60 ECTS credits (or equivalent).

2. The study of Physics during the qualification must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Physics syllabus/specification to the highest level in post- primary education (see www.curriculumonline.ie).

To meet this requirement the degree must include the study of at least five of the following areas:

1. Mechanics
2. Quantum Mechanics
3. Properties of Matter
4. Oscillations, Waves, Acoustics
5. Thermodynamics
6. Light and optics
7. Current Electricity
8. Electromagnetism
9. Electronics
10. Condensed Matter/ Solid State Physics
11. Relativity
12. Particle Physics
13. Topic in Advanced or Applied Physics
14. Astronomy
15. Laboratory/practical work must be completed in the course of the degree.