

Covid-19 Amendment Regulation (CAR) Subject Declaration Form

Applied Mathematics

This Subject Declaration Form allows you to match your degree (and other qualifications if applicable) against the Teaching Council's curricular subject requirements. You must meet the requirements for at least one curricular subject in order to be eligible for registration as a Post-primary teacher, having also completed a programme of Post primary initial teacher education that meets the Council's requirements.

This declaration form should be completed, printed and signed by persons applying for registration as a Post-primary teacher under CAR and forwarded with the CAR-01 (COVID-19 Amendment Regulation) Application Form.

You should complete a subject declaration form for each subject for which you are seeking Teaching Council registration.

The requirements for the curricular subject **Applied Mathematics** are set out on page 2.

For details of all other curricular subjects [click here](#).

Any material errors or misleading declarations made on this form may result in refusal of registration.

Based on this declaration form, your transcripts relating to the curricular subject sought and the transcripts of your initial teacher education qualification, the Teaching Council will confirm if, you will be eligible to register as a Post-primary teacher and which curricular subject(s) will be recorded on the Register of Teachers.

The information you provide on this form is a guide only and will be used to inform the Council's assessment process. The final decision on the suitability of content and credits allocated will be made by the Teaching Council. You will be registered for the curricular subject(s) for which you meet the requirements in full. If you do not meet the requirements in full for any subject you may be registered for the subject for which you are closest to meeting requirements (subject to conditions) as determined by the Council.

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/Mathematical Physics studied up to and including third-year level or higher (or modular equivalent). This must include the study of material in Pure Mathematics (as outlined in 2(b) below).
- (b) The qualifying degree must be equivalent to at least Level 8 on the National Framework of Qualifications (NFQ) and with a minimum pass¹ result in all examinations pertinent to the subject of Applied Mathematics/ Mathematical Physics.
- (c) The qualifying degree must carry at least 180 ECTS (European Credit Transfer System) credits (or equivalent) with the specific study of Applied Mathematics/Mathematical Physics comprising at least 60 ECTS credits (or equivalent) and with not less than 10 ECTS credits (or equivalent) studied at third-year level or higher (or modular equivalent).

2

The study of Applied Mathematics/Mathematical Physics during the degree must show that the holder has acquired sufficient knowledge, skills and understanding to teach the Applied Mathematics syllabus² 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 40 ECTS credits from the following essential areas (a) and (b) with the remaining 20 ECTS credits drawn from (a), (b) or (c):

Essential areas of study

- (a) Mechanics³ - a minimum of 20 ECTS credits (or equivalent) must be studied in this essential area
- (b) Pure Mathematics - all of the following essential areas must be studied with not less than 5 ECTS credits (or equivalent) in each area:
 - i. Geometry⁴
 - ii. Analysis⁵
 - iii. Algebra⁶
 - iv. Probability and Statistics⁷.

1 which includes pass by compensation.

2 as approved by the Minister for Education and Skills, and published by the National Council for Curriculum and Assessment (NCCA).

3 This must include modules in Kinematics and Dynamics of Particles and Rigid Bodies, and may include modules in Fluid Mechanics, Statics, Elasticity, Hamiltonian Mechanics, Statistical Mechanics, Quantum Mechanics, Field Theory or Soil Mechanics.

4 This must include modules in Euclidean and Non-Euclidean Geometry and may include modules in Cosmology, Relativity, Differential Geometry, Algebraic Geometry, or Topology.

5 This must include modules in Differential and Integral Calculus in one and several variables, and may include modules in Differential Equations, Complex Analysis, Abstract Analysis, Measure and Integral, or Topology.

6 This must include modules in Linear Algebra, and may include modules in Groups, Rings, Fields, Cryptology, Coding Theory, or Number Theory.

7 This must include modules in Probability and may include modules in Statistical Inference, Combinatorics, or Stochastic Processes.

Optional areas of study

- (c) Optional areas - the remaining 20 ECTS credits (or equivalent) may be in any of the above essential areas, or be drawn from the following optional areas:
- i. Dynamical Systems and Chaos
 - ii. Numerical Analysis or Computational Mathematics or Computational Modelling
 - iii. History or Philosophy of Applied Mathematics, Mechanics, Mathematics or Science
 - iv. Mathematical Modelling
 - v. Mathematical Biology
 - vi. Financial Mathematics
 - vii. Population Dynamics
 - viii. Environmental Modelling.

3

Applicants must also have completed a programme of post-primary initial teacher education (age range 12-18 years). The programme should include a methodology module(s) on the teaching of Applied Mathematics and/or Mathematics carrying a minimum of 5 ECTS credits (or equivalent).

Name:

Address:

Date of Birth: DD/MM/YYYY

PPS Number:

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Phone No:

Mobile No:

Email:

Degree Title:

Degree Awarding Body:

Year of award:

Other Relevant Qualification(s) in Applied Mathematics (if applicable):

Title of qualification	Awarding Body	Year of Award

Please answer questions 1-6 below and insert module code(s), module title(s) and ECTS credit values as required.		
1	Is your degree equivalent to a least a Level 8 on the Irish National Framework of Qualifications (NFQ)?	Yes No
2	Does your degree carry a minimum of 180 ECTS credits (or equivalent)?	Yes No
3	Do your studies in Applied Mathematics/Mathematical Physics carry a minimum of 60 ECTS credits (or equivalent)?	Yes No
4	Do your studies in Applied Mathematics/Mathematical Physics include the study of not less than 10 ECTS credits (or equivalent) at third-year level or higher (modular equivalent)?	Yes No
5	Do your studies in Applied Mathematics/Mathematical Physics include the study of a minimum of 40 ECTS credits (or equivalent) in the following essential areas: (a) a minimum of 20 ECTS credits (or equivalent) of Mechanics (b) not less than 5 ECTS credits (or equivalent) in each of the following areas: i. Geometry ii. Analysis iii. Algebra iv. Probability and Statistics	Yes No Yes No Yes No Yes No Yes No
6	Do your studies in Applied Mathematics/Mathematical Physics include study in any of the following optional areas: i. Dynamical Systems and Chaos ii. Numerical Analysis or Computational Mathematics or Computational Modelling iii. History or Philosophy of Applied Mathematics, Mechanics, Mathematics or Science iv. Mathematical Modelling v. Mathematical Biology vi. Financial Mathematics vii. Population Dynamics viii. Environmental Modelling	Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No

In relation to questions 3, 4, 5 and 6 above, please list below the code(s), title(s) and ECTS credit values for each module studied.

Essential Areas of Study

(a minimum of 40 ECTS credits is required from areas of study 5(a) - 5(b))

Area of Study:

Mechanics *(a minimum of 20 ECTS credits is required)*

Module Code	Module Title	ECTS Credit Value

Area of Study:

Geometry *(a minimum of 5 ECTS credits is required)*

Module Code	Module Title	ECTS Credit Value

Area of Study:

Analysis *(a minimum of 5 ECTS credits is required)*

Module Code	Module Title	ECTS Credit Value

Area of Study: Algebra (a minimum of 5 ECTS credits is required)		
Module Code	Module Title	ECTS Credit Value

Area of Study: Probability and Statistics (a minimum of 5 ECTS credits is required)		
Module Code	Module Title	ECTS Credit Value

Optional Areas of Study

The remaining 20 ECTS credits (or equivalent) may be in any of the above essential areas, or be drawn from the following optional areas:

- | | |
|--|--------------------------------|
| i. Dynamical Systems and Chaos | iv. Mathematical Modelling |
| ii. Numerical Analysis or Computational Mathematics or Computational Modelling | v. Mathematical Biology |
| iii. History or Philosophy of Applied Mathematics, Mechanics, Mathematics or Science | vi. Financial Mathematics |
| | vii. Population Dynamics |
| | viii. Environmental Modelling. |

Area of Study: Dynamical Systems and Chaos		
Module Code	Module Title	ECTS Credit Value

Area of Study: Numerical Analysis or Computational Mathematics or Computational Modelling		
Module Code	Module Title	ECTS Credit Value

Area of Study: History or Philosophy of Applied Mathematics, Mechanics, Mathematics or Science		
Module Code	Module Title	ECTS Credit Value

Area of Study: Mathematical Modelling		
Module Code	Module Title	ECTS Credit Value

Area of Study: Mathematical Biology		
Module Code	Module Title	ECTS Credit Value

Area of Study: Financial Mathematics		
Module Code	Module Title	ECTS Credit Value

Area of Study: Population Dynamics		
Module Code	Module Title	ECTS Credit Value

Area of Study: Environmental Modelling		
Module Code	Module Title	ECTS Credit Value

Area of Study: Other		
Module Code	Module Title	ECTS Credit Value

Total ECTS Credits in Applied Mathematics	
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I declare that I have completed the studies in **Applied Mathematics** as set out above and that the details that I have entered in the tables above are true and accurate to the best of my knowledge.

Name:

Date: DD/MM/YYYY

Signature:

IMPORTANT

This declaration form should be returned to the Teaching Council with the CAR Amendment Regulation Application Form (CAR-01).