

School of Education

Title of Programme: Maths Specialist Teacher (MAST) - Postgraduate Certificate in  
Education

Programme Code: EDEDMA

Course Code: EDEDPGC

## Programme Specification

This programme specification is relevant to students entering:  
01 January 2020

Associate Dean of School (Academic Quality Assurance):  
Alison McLauchlin



Signature

A programme specification is a collection of key information about a programme of study (or course). It identifies the aims and learning outcomes of the programme, lists the modules that make up each stage (or year) of the programme, and the teaching, learning and assessment methods used by teaching staff. It also describes the structure of the programme, its progression requirements and any programme-specific regulations. This information is therefore useful to potential students to help them choose the right programme of study, to current students on the programme, and to staff teaching and administering the programme.

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### Summary of amendments to the programme

Date	Section	Amendment

If you have any queries regarding the changes please email [AQO@herts.ac.uk](mailto:AQO@herts.ac.uk)

# Programme Specification Postgraduate Certificate in Education

This programme specification (PS) is designed for prospective students, enrolled students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content for each module can be found in Definitive Module Documents (DMDs) and Module Guides.

## Section 1

<b>Awarding Institution/Body</b>	University of Hertfordshire
<b>Teaching Institution</b>	University of Hertfordshire
<b>University/partner campuses</b>	De Havilland
<b>Programme accredited by</b>	Not applicable
<b>Final Award (Qualification)</b>	Postgraduate certificate
<b>All Final Award titles (Qualification and Subject)</b>	Postgraduate certificate in Education
<b>FHEQ level of award</b>	7
<b>Language of Delivery</b>	English

### A. Programme Rationale

The Mathematics Specialist Teacher programme (MaST) is a professional development programme for primary school teachers. Those engaged in the programme will be teachers with a keen interest in developing their own practice as well as supporting colleagues to do the same. They may already have considerable expertise in the teaching and learning of mathematics within the primary school setting.

The programme seeks to move all participants to a higher level of expertise, opening their eyes to new and exciting opportunities both in their own teaching and in whole school development.

The University of Hertfordshire, working together with Herts for Learning, will take teachers through a new approach to looking at mathematics. It is well documented through research (eg Askew et al 1999) that the most effective teachers are those who make connections in mathematics and enable their pupils to reason, problem-solve and develop a conceptual understanding within relevant contexts: by so-doing, pupils gain flexibility in their thinking, are willing to persevere and demonstrate greater confidence. We believe that by looking at the bigger picture in mathematics -through the big ideas that span and connect the mathematics curriculum - teachers will develop deeper insight and increase their capacity for seeing and making connections.

### B. Educational Aims of the Programme

The programme has been devised in accordance with the University's graduate attributes of programmes of study as set out in [UPR TL03](#).

Additionally there are 'the four big ideas' – these are four key themes, which represent the big ideas in mathematics, they are:

- **Mathematical thinking**- this will encompass what it means to learn mathematics and be a mathematician, to reason and think in mathematical ways and to apply understanding and skills in solving problems.
- **Pattern**- The whole of the mathematics curriculum could be summed up in this one word. Mathematics would not exist if it were not for pattern and the structure and relationships that it creates.
- **Generality – Relationships and structures in mathematics can be generalised and thus connected.** In particular this is what algebra does, which makes it a powerful problem solving tool. Although formal algebra is not taught within the primary curriculum, the development of algebraic thinking is central to sustained progression and success in the subject.

- Representation- Mathematics is an abstract subject with concepts that can be represented in a multitude of different ways; some representations have more than one legitimate interpretation. Communicating mathematics through representations is challenging for both the teacher and the learner; but exploration of this theme can develop significant insight into the subject.

### Mathematics-specific Pedagogies

Threaded through the above four big ideas will be key pedagogies, which will be constantly referred to, modelled, developed and applied.

They are:

- Prompting children’s thinking through questions:
- Enabling learning through drawing attention to and developing reasoning and making connections
- Providing opportunities for children to manipulate, experience, see (mathematics) engage in talk (listen, analyse and discuss)
- Developing children’s thinking through: Investigation and Scaffolding

## C. Intended Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014), and relate to the typical student.

Additionally, the SEEC Credit Level Descriptors for Further and Higher Education (2016) have been used as a guiding framework for curriculum design.

Knowledge and Understanding:	Teaching/learning methods & strategies	Assessment
<p>A1 professional practices, theoretical approaches, research debates and new insights appropriate to the study of education, training and care practice.</p> <p>A2- the impact of enquiry on professional practice.</p> <p>A3 how professional practice is informed by reflection in context.</p> <p>A4- methods of enquiry into professional practice.</p> <p>A5- good leadership and management practice informed by research, reflection and other evidence.</p>	<p>Acquisition of knowledge and understanding is supported through a range of teaching and learning strategies including seminars, small group tutorials, on-line tasks and discussions and practice based enquiry/research. (A1-A5)</p> <p>Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.</p> <p>Additional support is provided by means of individual support through telephone and email contact and the managed learning environment.</p>	<p>Knowledge and understanding are assessed through (although not limited to) presentations, written assignments, portfolios and reflective journals. (A1-A5)</p>
Intellectual skills:	Teaching/learning methods & strategies	Assessment
<p>B1-Reflect on and evaluate the effectiveness of practice.</p> <p>B2-Analyse research evidence and relate this to practice development.</p> <p>B3-Critically review evidence and relate this to practice</p> <p>B4-Integrate theory and practice.</p>	<p>Intellectual skills are developed through methods and strategies outlined in A above.</p> <p>Additionally research skills are developed throughout the programme.</p>	<p>Intellectual skills are assessed through methods and strategies outlined in A above B1-5.</p>

B5-Synthesise ideas and/or information into new forms for the development of practice.	Throughout, the learner is encouraged to develop intellectual skills further by independent study.	
<b>Practical skills:</b>	<b>Teaching/learning methods &amp; strategies</b>	<b>Assessment</b>
C1-Identify and work to address professional development needs related to personal practice. C2-Carry out small scale enquiry related to personal practice. C3-Carry out enquiry relating to the wider context of professional development and of leadership and management. C4-apply new knowledge and understanding to improve practice in flexible and creative ways. (new ways/original ways for personal/professional context). C5-evaluate the impact of changes to practice. C6-manage ethical issues within research.	Practical skills are developed through methods and strategies outlined in A above C1-C6.	Practical skills are assessed through methods and strategies outlined in A above C1-C6.
<b>Transferable skills:</b>	<b>Teaching/learning methods &amp; strategies</b>	<b>Assessment</b>
D1- Communicate effectively, both orally and in writing. D2- Work effectively as part of a learning community. D3- Present and support an extended argument. D4-Exercise initiative. D5-Demonstrate independent learning ability. D6-Use evidence to inform decision making.	Transferable skills are developed through preparing and writing assignments and participation in class and on-line discussion tasks.  Throughout, the learner is encouraged to develop transferable skills by maintaining a record of evidence and completing a personal development plan.	Transferable skills are assessed through methods and strategies outlined in A above and particularly within the final module Practice Based Research Project D1-D6.

## D. Programme Structures, Features, Levels, Modules, and Credits

The programme is offered in a part time, 2 year mode, and leads to the award of a Postgraduate Certificate in Education. Students take 30 credits per academic year. Intake is normally in January (semester B) each year. It is possible for students who complete the Postgraduate Certificate to APCL on to the MA Education programme.

### Professional and Statutory Regulatory Bodies

#### Programme Structure

The programme structure and progression information below (Table 1a and 1b) is provided for the award. Any interim awards are identified in Table 1b. The Programme Learning Outcomes detailed above are developed and assessed through the constituent modules. Table 2 identifies where each learning outcome is assessed.

#### Table 1a Outline Programme Structure

**Mode of study** Part time

**Entry point** Semester B

Compulsory Modules Module Title	Module Code	Credit Points	Language of Delivery	% Examination	% Coursework	% Practical	Semesters
Knowledge in Maths: Number, Calculation, Measures and Data	7EDU1015	30	English	0	100	0	AB, BC
Specialist Maths: algebra and geometry	7EDU1014	30	English	0	100	0	AB, BC

Table 1b Final and interim awards available

The programme provides the following final award:

Final Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
Postgraduate Certificate	Education	60 credit points, including at least 30 at level 7	2 Semesters	All programme learning outcomes (see table 2)

## Programme-specific assessment regulations

The programme is compliant with the University's academic regulations (in particular, [UPR AS11](#), [UPR AS12/UPR AS13](#) and [UPR AS14](#)).

## E. Management of Programme & Support for student learning

### Management

The programme is managed and administered through:

- Dean of School.
- Associate Dean of School (AQA) who has delegated responsibility for Programmes in the School of Education.
- A programme Leader who is responsible for the day to day running of the programme.
- An award leader who support students through their chosen award pathway
- An admissions tutor with specific responsibility for promoting the programme and selection.
- A designated Administrator to deal with day to day administration associated with the programme.
- Module leaders who are responsible for individual modules.
- A programme committee, the membership of which includes the Programme Leader, module leaders of the modules offered in the programme, student representatives and, ex-officio, the Dean of School.

### Support

Students are supported by;

- A Programme Leader
- Module Leaders to provide academic and pastoral support
- An award leader

- Student representatives on programme committees
- A designated Student Administrator
- An induction at the beginning of the academic session
- StudyNet, a versatile on-line inter-active intranet and learning environment
- Attractive modern study environments in 2 Learning Resources Centres
- Access to extensive digital and print collections of information resources
- A substantial Student Centre that provides advice on issues such as finance, University regulations, legal matters, accommodation, international student support, etc
- Office of Dean of Students, incorporating Chaplaincy, Counselling and nursery
- A Careers Service for all current students and graduates
- Disabled Student Co-ordinator

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## F. Other sources of information

In addition to this Programme Specification, the University publishes guidance to registered students on the programme and its constituent modules:

- A Programme (or Student) Handbook;
- A Definitive Module Document (DMD) for each constituent module;
- A Module Guide for each constituent module.

The [Ask Herts](#) website provides information on a wide range of resources and services available at the University of Hertfordshire including academic support, accommodation, fees, funding, visas, wellbeing services and student societies.

As a condition of registration, all students of the University of Hertfordshire are required to comply with the University's rules, regulations and procedures. These are published in a series of documents called 'University Policies and Regulations' (UPRs). The University requires that all students consult these documents which are available on-line, on the UPR web site, at: <http://www.herts.ac.uk/secreg/upr/>. In particular, [UPR SA07](#) 'Regulations and Advice for Students' Particular Attention - Index' provides information on the UPRs that contain the academic regulations of particular relevance for undergraduate and taught postgraduate students.

In accordance with section 4(5) of the Higher Education and Research Act 2017 (HERA), the UK Office for Students (OfS) has registered the University of Hertfordshire in the register of English higher education providers. The Register can be viewed at: <https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/>. Furthermore, the OfS has judged that the University of Hertfordshire delivers consistently outstanding teaching, learning and outcomes for its students. It is of the highest quality found in the UK. Consequently, the University received a Gold award in the 2018 Teaching Excellence and Student Outcomes (TEF) exercise. This award was made in June 2018 and is valid for up to 3 years. The TEF panel's report and conclusions can be accessed at: <https://www.officeforstudents.org.uk/advice-and-guidance/teaching/tef-outcomes/#/provider/10007147>

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## G. Entry requirements

The normal entry requirements for the programme are:

- UK Honours degree or equivalent qualifications.
- GCSE English and mathematics grade 4 or above (or UH recognised equivalent).
- Qualified Teacher Status (QTS)
- Need to work in an educational setting delivering maths to meet the National Curriculum requirements for Early Years, Key Stage 1 and Key Stage 2

International students will normally need to have an English language proficiency equivalent to an IELTS score of at least 7.0 (with a score of at least 6.5 in reading and writing).

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in [UPR SA03](#)), along with associated procedures.

These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

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If you would like this information in an alternative format please contact: [aqo@herts.ac.uk](mailto:aqo@herts.ac.uk)

If you wish to receive a copy of the latest Programme Annual Monitoring and Evaluation Report (AMER) and/or the External Examiner's Report for the programme, please email a request to [aqo@herts.ac.uk](mailto:aqo@herts.ac.uk)

## Postgraduate Certificate in Education

**Table 2: Development of Intended Programme Learning Outcomes in the Constituent Modules**

This map identifies where the programme learning outcomes are assessed in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the programme aims (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own learning, personal and professional development as the programme progresses.

		Programme Learning Outcomes (as identified in section 1 and the following page)																															
		Knowledge & Understanding								Intellectual Skills								Practical Skills								Transferable Skills							
Module Title	Module Code	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5	D6	D7	D8
Specialist Maths: algebra and geometry	7EDU1014	x	x	x	x	x				x	x	x	x	x				x	x	x	x	x	x			x	x	x	x	x	x		
Knowledge in Maths: Number, calculation, measures and data	7EDU1015	x	x	x	x	x				x	x	x	x	x				x	x	x	x	x	x			x	x	x	x	x	x		

## KEY TO PROGRAMME LEARNING OUTCOMES

### Knowledge and Understanding

- A1. Professional practices, theoretical approaches, research debates and new insights appropriate to the study of education, training and care practice
- A2. The impact of enquiry on professional practice
- A3. How professional practice is informed by reflection in context
- A4. Methods of enquiry into professional practice
- A5. Good leadership and management practice informed by research, reflection and other evidence

### Intellectual Skills

- B1. Reflect on and evaluate the effectiveness of practice
- B2. Analyse research evidence and relate this to practice development
- B3. Critically review evidence and relate this to practice
- B4. Integrate theory and practice
- B5. Synthesize ideas and/or information into new forms for the development of practice

### Practical Skills

- C1. Identify and work to address professional development needs related to personal practice
- C2. Carry out small scale enquiry related to personal practice
- C3. Carry out enquiry relating to the wider context of professional development and of leadership and management
- C4. Apply new knowledge and understanding to improve practice in flexible and creative ways (new ways/original ways for personal/professional context)
- C5. Evaluate the impact of changes to practice
- C6. Manage ethical issues within research

### Transferable Skills

- D1. Communicate effectively, both orally and in writing
- D2. Work effectively as part of a learning community
- D3. Present and support an extended argument
- D4. Exercise initiative
- D5. Demonstrate independent learning ability
- D6. Use evidence to inform decision making

## Section 2

### Programme management

<b>Relevant QAA subject benchmarking statements</b>	None
<b>Type of programme</b>	Postgraduate Taught
<b>Date of validation/last periodic review</b>	October 16
<b>Date of production/ last revision of PS</b>	March 19
<b>Relevant to level/cohort</b>	Level 7 entering January 2020
<b>Administrative School</b>	School of Education

Table 3 Course structure

Course details		
Course code	Course description	JACS/HECOS
EDEDPGC	Pg Cert Education	X300/100459