Secondary Computer Science

Final award	Postgraduate Certificate in Education (PGCE)
Intermediate awards available	None
GTTR code	N/A
Details of professional body accreditation	Recommendation for Qualified Teacher Status(QTS)
Relevant QAA Benchmark statements	Education Studies
Date specification last up-dated	August 2013

Alternative Locations of Delivery

Location	Which Elements	Taught by UEL Staff	Taught by Local Staff	Method of Delivery
Hibernia College UK Ltd	Entire Programme	No	Yes	Full Time*

*This programme is taught in partner schools and online by HCUK staff and not on UEL campus.

Programme content Aims

The PGCE Secondary Computer Science programme is designed to meet the Standards required for Qualified Teacher Status (QTS) and to develop secondary teachers with a specialism in Computer Science

It aims to do this in the context of our Secondary Partnership schools many of which are situated in east London where skills of educating children in a multi-cultural, multi-lingual urban environment are paramount.

Overall the programme aims to produce effective teachers who are able to operate as reflective practitioners. To fit this description you should:

- develop your knowledge, skills and understanding of what it means to be a professional in school
- engage in practical and theoretical enquiry as a key element in your development as teachers. Whereby you are expected to:
- be able to critically review, using a range of research and scholastic skills, a systematic and coherent body of knowledge related to education and subject pedagogy
- be able to evaluate critically new information, concepts and evidence from a range of sources
- be able to exercise appropriate judgment, by applying appropriate diagnostic and creative skills, in a range of situations
- be able to accept accountability for determining and achieving personal and/or group outcomes by reflecting on and taking responsibility for your own professional development

- develop your ability to read and write critically at Masters level

PGCE Secondary Computer Science

The PGCE: Secondary Computer Science is a partnership programme. This means that it has been written and developed in collaboration with local schools. The majority of your time will be spent in schools observing teaching and learning, considering how the theory of education and the practice link together and, of course, working with children in classroom settings.

You will be studying in a diverse community of trainees from a range of different subjects as well as studying alongside fellow trainees.

Many themes such as equal opportunities, bilingualism, meeting the needs for children with special educational needs etc. underpin the taught programme.

The subject studies elements of the programme focus on teaching Computer Science as a curriculum subject and developing your subject specialism. These sessions aim to:

provide an introduction to Computer Science as curriculum subjects

- enable you to develop high levels of teaching skills and classroom management, as well as the capacity for reflection and further professional development
- offer theoretical perspectives on the principles of syllabus design and evaluation, and the assessment and recording of children's progress in both classroom and workshop situations
- provide knowledge and understanding of the National Curriculum and the framework of statutory requirements

You will be engaging with research at Masters Level in two modules, one on the potential uses of new and emerging technologies in secondary education and the second on developing subject expertise and subject pedagogy.

Admission requirements

Application is through the Graduate Teacher Training Register (GTTR). You will need to demonstrate through the GTTR form and at interview that you:

- are an effective reader and are able to communicate clearly and accurately in Standard English, both spoken and written
- possess the appropriate personal and intellectual qualities to be a teacher
- have achieved a standard equivalent to Grade C in the GCSE examinations in English and Mathematics
- hold a first degree in an appropriate subject from a United Kingdom Higher Education Institution or an equivalent qualification.
- in the case of applicants whose first language is not English, then IELTS 7.0 (or equivalent) is required. International qualifications will be checked for appropriate matriculation to UK Higher Education postgraduate programmes.

The process of selection will involve:

- scrutiny of the GTTR form
- a face to face individual interview
- subject audits
- a literacy task
- a numeracy task
- a subject task.
- a short presentation

UEL is also required to ensure that potential entrants:

- satisfy the Secretary of State's requirements for physical and mental fitness to teach;
- undergo a Disclosure & Barring Service (DBS) Enhanced Disclosure check to ensure that they do not have a background which prevents them from working with children or young persons or that they have not been previously excluded from teaching or working with children.
- Successful candidates will also have to have passed the professional skills tests before they can be enrolled on the programme.

Programme structure

The programme runs over 36 weeks from September to July. Twenty-four weeks will be spent in partner schools - generally split into two separate and contrasting placements. The remaining time will be taken up in seminars, tutorials and assignment activities designed to support your professional development.

The UEL Secondary Team also offers an additional subject knowledge development course in Computer Science. The subject knowledge development course starts before the full PGCE programme in early September.

Learning environment

Effective learning requires a range of teaching strategies. So within the course of the year you will be engaged in seminars and workshops as well as attending more traditional lectures. These activities will be supported by web-based learning. Where appropriate, practical sessions will be arranged in laboratory space.

The school placements are supported by external training visits, as well as by school based mentors.

Assessment

For the award of PGCE all of the required assignments need to be passed. In order to be recommended for Qualified Teacher Status, you have to demonstrate that you have met all of the Standards specified for Qualified Teacher Status. To this end there is ongoing assessment of your planning, teaching and assessment of pupils which will be logged in your Professional Development Portfolio which you are required to keep. The School Based Training Placements are assessed by observation carried out by tutors and school based staff.

In completing the programme, successful submission of the two M level modules will lead to the award of Postgraduate Certificate of Education, carrying 60 M level credits. If on

resubmission either of the M level modules passes at Level 3 only, the award is Professional Graduate Certificate of Education, carrying either 30 M level credits or no M level credits.

Relevance to work/profession

The whole programme is designed around a set of Standards that are nationally agreed as the first step in building an effective career in teaching.

All of the assignments are professionally based and designed to assess aspects of the Standards as well as your level of academic engagement.

Each trainee has an assigned mentor in school whose role it is to support, monitor and assess you.

Your future career

Successful completion of the programme enables you to apply for teaching posts. There is a very high success rate for our trainees securing these posts. There is a clear career structure in place within the teaching profession, with a number of different paths available. Some move along the management path - through middle management in subject or pastoral issues to senior management, and headship. Some wish to concentrate on teaching and develop this to become Senior Leaders of Education.

How we support you

You receive mentor support within schools supplemented by visits from your tutor. Tutorial support is also available and this will be negotiated around your individual development needs. The programme is designed to support you in meeting the Teachers' Standards through focused seminars, lectures and assignments.

Bonus factors

Trainees who successfully complete the programme are highly sought after for employment in local schools. It is not uncommon for trainees to secure employment in their placement schools. This is because head teachers of local schools realise that the programme provides trainees with the skills and confidence to work effectively in the context of East London. On programme trainees will also have the opportunity to develop their e-learning skills through experience of new and emerging technologies. The skills and knowledge that trainees gain during this programme are highly portable.

Your qualification will include 60 credits at M level which may be used as credit towards the MA Education programme at UEL under our Accreditation of Experiential Learning (AEL) policy.

Outcomes

Programme aims and learning outcomes

What is this programme designed to achieve?

Overall this programme has been designed to produce effective teachers who are able to operate as reflective practitioners. To fit this description you should:

- have appropriate subject knowledge and understanding for teaching in Computer Science
- demonstrate knowledge and understanding at an appropriate level of the underpinning theories of professional practice appropriate for a beginning teacher
- have an understanding of relevant pedagogy and be able to relate this to teaching and learning
- have a detailed knowledge and understanding of the relevant National Curriculum and frameworks
- be aware of expectations, typical curricula and teaching arrangements in the Key Stages before and after the ones you are trained to teach
- be aware of, and work within, the statutory frameworks relating to teachers' responsibilities
- be able to exercise appropriate judgment, by applying appropriate diagnostic and creative skills, in a range of situations
- be able to accept accountability for determining and achieving personal goals.

The programme aims to provide you with an understanding of the education system in England, as well as an understanding of how to teach Computer Science in secondary schools. You will become familiar with the requirements of the National Curriculum, GCSE and 14-19 qualifications. You will also consider the various resources, including ICT, available for teaching your subject. The initial sessions will prepare you for your first period of school experience. For example, planning, behaviour management and assessment will be the focus for several of the taught sessions. You will also consider the legal and professional requirements of being a teacher. Sessions later in the year build on your experience and understanding and develop further your ability to plan, organise and manage pupils' learning experiences.

The programme has been designed to allow you to meet the Standards required for recommendation for Qualified Teacher Status.

What will you learn?

Our programmes of initial teacher training and education focus on broad professional issues, and on subject content and subject pedagogy. Through these you will develop the following:

Knowledge

- the English education system
- professional values and practice
- the statutory documentation including the National Curriculum in KS3 and 4, the secondary strategy, GCSE and 14-19 qualifications for Computer Science and how they are assessed. Through the programme and your school experience you will gain an understanding of the National Curriculum for Citizenship and PSHE.
- health and safety issues in the classroom
- relevant legislation

- have a knowledge and understanding of the potential of new and emergent technologies in secondary education

Thinking skills

- analyse and synthesise evidence from research, inspection and professional debate to develop a personal philosophy of teaching
- theorise key issues relating to educational practice
- be reflectively critical about transferable skills and personal progress in professional development
- engage in educational debates in a professional manner
- exercise critical judgment on professional ideas
- be able to reflect critically on the relationship between theory and practice in order to inform professional decision making
- examine critically the ethical and moral aspects of education
- examine critically a variety of teaching practices
- be able to read and write critically at Masters levels.
- be able to use computational thinking skills

Subject-Based Practical skills

- be an effective class teacher of secondary aged children
- teach effectively in inner city schools and be responsive to the needs of a multi-ethnic and multilingual community and to the differing backgrounds of children
- assess pupils' progress accurately
- accept professional accountability for determining and implementing informed pedagogical judgments;
- take responsibility for teaching a class over a sustained and substantial period of time
- record pupils' progress and achievements systematically
- produce coherent short term and medium term plans based on the NC for Computer Science
- present and communicate subject content effectively, using appropriate resources and taking account of the differing learning needs of your pupils
- develop strategies for behaviour management
- develop appropriate methods of monitoring and assessing pupil attainment
- implement and evaluate a small scale project in a chosen specialist area of educational practice

Skills for life and work (general skills)

- develop your ICT skills for professional use, including skills in using new and emerging technologies
- identify and address your subject knowledge needs in order to meet the requirements for the award of QTS.
- take an evaluative and active role in your continuing professional development.
- develop time management strategies
- develop positive relationships with other adults/professionals and children
- communicate effectively orally and in writing
- make decisions in complex and unpredictable situations
- take responsibility for one's own professional development

- work co-operatively in a group or as part of a team
- systematically gather and use data for decision making

Structure

The programme structure

Introduction

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

- 0 - equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme
- 1 - equivalent in standard to the first year of a full-time undergraduate degree programme
- 2 - equivalent in standard to the second year of a full-time undergraduate degree programme
- 3 - equivalent in standard to the third year of a full-time undergraduate degree programme
- M - equivalent in standard to a Masters degree

Credit rating

The overall credit-rating of this programme is equivalent to 120 credits, 60 credits at level 3 and 60 at M level to be awarded a Postgraduate Certificate in Education.

An alternative exit award of a Professional Graduate Certificate in Education is available if 60M level credits are not secured.

Typical duration

The typical duration of this programme is 36 weeks full time

How the teaching year is divided

The teaching year is divided into three school terms, the school's half terms are designated as directed study time.

The teaching year begins in September and ends in July.

What you will study when

The backbone of the programme is the core General Professional Studies. These sessions are consolidated by subject-based workshops and seminars which look at the implications of particular issues to subject teaching.

The majority of time on the programme is spent on placement – you must complete 120 days in schools in order to comply with regulations for the award of Qualified Teacher Status. The first school experience placement usually takes place in the Autumn and early Spring Term whilst the second school experience will be undertaken during the second half of the Spring Term and the Summer Term.

Some time within the programme is used flexibly for tutorial and ongoing professional development in areas such as subject knowledge updating and ICT skill development.

Indicative Core Session Titles

- Introduction to Teaching and Learning (Learning Styles)
- Teaching in East London
- Introduction to Key Stage 2
- Observing Teaching and Learning
- The National Curriculum: principles and framework
- Introduction to the role of the teacher and support staff
- Introduction to Behaviour Management
- Introduction to lesson planning and evaluation
- Safeguarding children
- Introduction to Monitoring and Assessment
- Literacy across the curriculum
- Numeracy across the curriculum
- Child Development and Influences on Learning
- Introduction to Differentiation
- Introduction to Special Educational Needs
- Introduction to English as an Additional Language
- Applying for teaching posts
- Raising achievement: tracking pupil progress
- Working with other adults in the classroom.

Requirements for gaining an award

In order to gain a **Postgraduate Certificate**, you will need to pass the programme assignment set at level three and the two modules set at M level. These modules are:

- Developing subject expertise and subject specialism (30 credits at M level)
- New and emerging learning technologies in mainstream education (30 credits at M level)

(In completing the programme, successful submission of the two M level modules will lead to the award of Postgraduate Certificate of Education, carrying 60 M level credits. If on resubmission either of the M level modules passes at Level 3 only, the award is Professional Graduate Certificate of Education, carrying either 30 M level credits or no M level credits.)

Masters Award Classification

Where a student is eligible for an Masters award then the award classification is determined by calculating the arithmetic mean of all marks and applying the mark obtained as a percentage, with all decimals points rounded up to the nearest whole number, to the following classification

70% - 100%	Distinction
60% - 69%	Merit
50% - 59%	Pass
0% - 49%	Not Passed

Assessment

Teaching, learning and assessment

Teaching and learning

Knowledge is developed through

- taught sessions
- group seminars
- subject knowledge audits
- directed tasks and collaboration in the Virtual Schools project
- observations of experienced practitioners
- subject related reading used to inform assignment writing and teaching practice
- discussions with peers and professional colleagues.

Thinking skills are developed through

- workshop discussions
- contributions to team planning in partner school
- reflection on practice
- research around set tasks and activities
- development of arguments in assignments.
- written assignments
- professional dialogue in seminars and on placement

Practical skills are developed through

- school based tasks
- role play
- observations of demonstration lessons by experienced tutors and teachers

- constructive feedback on your practice from mentors and tutors
- reflection on practice.

Skills for life and work (general skills) are developed through

- maintaining a Professional Development File
- writing an Individual Development Plan
- completing the Career Entry and Development Profile
- working in peer groups
- observing professional behaviour in others and modeling this in your own behaviour.

Assessment

The Professional Development File is used to record all evidence towards each of the Standards required for the conferment of Qualified Teacher Status. All of this evidence is seen by a mentor and/or tutor to check that the quality of the evidence is sufficient to demonstrate that the Standard has been met. Examples of the sorts of evidence that might be appropriate include:

- observations and feedback by mentors
- lesson plans and evaluations
- assignments
- directed tasks
- lecture and seminar notes.

Quality

How we assure the quality of this programme

Before this programme started we checked that:

- there would be enough qualified staff to teach the programme
- adequate resources would be in place
- the overall aims and objectives were appropriate
- the content of the programme met national benchmark requirements
- the programme met any professional/statutory body requirements
- the proposal met other internal quality criteria covering a range of issues such as admissions policy, teaching, learning and assessment strategy and student support mechanisms.

This is done through a process of programme approval which involves consulting academic experts including some subject specialists from other institutions.

How we monitor the quality of this programme

The quality of this programme is monitored each year through evaluating:

- external examiner reports (considering quality and standards)
- statistical information (considering issues such as the pass rate)
- trainee feedback.

Drawing on this and other information, programme teams undertake the annual Review and Enhancement Process which is co-ordinated at School level and includes student participation. The process is monitored by the UEL's Quality Standing Committee.

Secondary Initial Teacher Training Programmes are subject to scrutiny by Ofsted on a regular basis – the reports are published on the Ofsted website. UEL Secondary provision was inspected in 2012 and provision was judged to be Good.

Once every six years UEL undertakes an in-depth review of the whole field. This is undertaken by a panel that includes at least two external subject specialists. The panel considers documents, looks at student work, speaks to current and former students and speaks to staff before drawing its conclusions. The result is a report highlighting good practice and identifying areas where action is needed.

The role of the programme committee

This programme has a programme committee comprising all relevant teaching staff, student representatives and others who make a contribution towards the effective operation of the programme (e.g. library / technician staff). The committee has responsibilities for the quality of the programme. It provides input into the operation of the Review and Enhancement Process and proposes changes to improve quality. The programme committee plays a critical role in the University's quality assurance procedures.

The role of external examiners

Each programme within Secondary Initial Teacher Training is monitored by one external examiner with one of these offering, in addition, an overview of core provision. External examiners have two primary responsibilities:

- to ensure the standard of the programme
- to ensure that individual students are dealt with in accordance with the regulations.

External examiners fulfil these responsibilities in a variety of ways including:

- approving assignments
- attending assessment boards
- reviewing samples of student work and moderating marks
- ensuring that regulations are followed
- providing feedback to UEL through an annual report that enables us to make improvements for the future.

Listening to the views of students

The following methods for gaining student feedback are used on this programme:

- trainee representatives on the Programme Committee
- trainee focus groups and trainee voice surveys
- end of placement and end of programme evaluation
- trainee involvement in programme development.

Students are notified of the action taken through:

- trainee representatives feeding back to trainees
- relevant information posted on VLE or wiki notice board
- email.

Listening to the views of others

The following methods are used for gaining the views of other interested parties:

- questionnaires to former students
- close liaison with partner schools
- questionnaires to employing headteachers
- mentor working groups
- NCTL questionnaire to newly qualified teachers.

Further Information

Where you can find further information

Further information about the programme is available from:

- [Secondary Teacher Training](#)
- The National College for Teaching & Leadership
- [Ofsted Provider Report](#)
- [The GTTR](#)
- The PGCE Secondary trainee handbooks
- [UEL Manual of General Regulations and Policies](#)
- [UEL Quality Manual](#)
- [Current External examiners](#)
- External examiner reports (available from UEL virtual learning environment)