

## Programme Specification 2025-26

### Certificate in Genetics

<b>Awarding body</b>	University of Cambridge
<b>Teaching institution</b>	University Of Cambridge, Institute Of Continuing Education
<b>Accreditation details</b>	
<b>Name of final award</b>	Certificate
<b>Programme title</b>	Certificate in Genetics
<b>UCAS code</b>	
<b>HECoS code(s)</b>	
<b>Relevant QAA benchmark statement(s)</b>	
<b>Qualifications framework level</b>	Level 4
<b>Date specification produced</b>	03 Sep 2024 18 December 2024

\* [Cognate Faculty endorsement provided by:](#)

The mission of the Institute of Continuing Education (ICE) is to support the University of Cambridge's promise to prioritise and enable learning throughout life and to promote the widest possible access for learners to the University. ICE uses the expertise of its staff, the collegiate University, and its wider networks to deliver a broad portfolio of research-informed world-leading qualifications. ICE delivers supportive and inclusive education and welcomes learners seeking to engage with higher education for the first time, returning after an extended break, seeking opportunities to learn later in life and looking to advance their careers.

#### Educational aims

The programme of study aims to:

- 1.Explain what DNA is at the molecular level;
- 2.Introduce students to the core concepts of what genes are and how they work, enabling students to appreciate the transfer of genetic information in living cells;
- 3.Explain how mutations can arise and the consequences for cellular functioning;
4. Demonstrate how gene function is controlled as part of the genome;
- 5.Detail key advances in modern genetic techniques and projects such as genome wide association studies, gene therapy and the use of stem cells;
- 6.Explain how genetic material is passed from generation to generation and how this can influence the genetic structure of whole populations.

#### Learning outcomes

As a result of studying this programme students should meet the following learning outcomes.

#### Knowledge and Understanding

- A1 Knowledge of what genes are and how DNA sequence determines protein composition and function
- A2 Knowledge of how genes are arranged within chromosomes
- A3 Knowledge of the mechanisms by which variation is generated
- A4 Knowledge of the inheritance and underlying causes of genetic traits and diseases including the interplay of genes and the environment

#### Key Skills

- D1 A heightened ability to consider problems in a rigorous scientific manner
- D2 The ability to critically assess scientific papers and writing and place biological studies into the broad field of Genetics
- D3 An understanding of some practical data collection methods, data interpretation and presentation
- D4 An ability to use scientific search engines, such as Web of Science, to access online publications
- D5 A heightened ability to discuss scientific ideas in an open forum

### **Programme structure**

3 compulsory units at FHEQ Level 4 totalling 60 credits.

Units, along with indicative content, are outlined below.

#### **Year 1**

DNA, the stuff our genes are made of 2025-26

From genes to genomes 2025-26

Genetics: past, present and future 2025-26

### **Teaching methods**

The programme is delivered remotely using a combination of synchronous and asynchronous approaches. Synchronous sessions will be delivered using a platform such as Zoom or Microsoft Teams. Asynchronous material will be provided through the course virtual learning environment and will allow students to engage with teaching material at a suitably convenient time. Examples of the type of teaching methods used include, but are not limited to, live and pre-recorded lectures, seminars, group discussions, online readings, quizzes, data handling exercises, group activities and discussion forums. Peer-to-peer learning forms an important element of course teaching.

### **Assessment methods**

The programme will contain items of formative (not counting towards the final mark) and summative (counting towards the final mark) assessment. Formative assessment will receive tutor and/or peer feedback and is designed to facilitate completion of the summative

assessments. Summative assessments will consist of tasks appropriate to the discipline of study and may include, but not be limited to, essays, reports, presentations, posters, critical reviews, data handling and analysis, and group activities. The volume of work required to complete the award shall be 9,000–12,000 words or the equivalent.

### **Entry and/or progression requirements**

There are no formal academic entry requirements for the programme but, as it is taught at university level, applicants need to be able to read, write and speak English fluently. The minimum requirement for IELTS is an overall band score of 7.0 with not less than 7.0 in speaking, listening and writing, and 6.5 in reading.

Students who have completed a certificate will be able to progress to level 5 provision within the Institute at the discretion of the academic director. Where appropriate, students may be advised to take a second certificate before progressing to level 5 provision.

Credit awarded by the Institute may be transferred into the degree programmes of some other higher education providers. The amount of credit which can be transferred into degree programmes varies from institution to institution and is always at the discretion of the receiving institution.

### **Student support**

ICE provides all students with access to learning and welfare support via the Institute's virtual learning environment. This includes generic and subject specific learning resources and wider support services, including those focused on wellbeing.

### **Management of teaching quality and standards**

### **Graduate employability and career destinations**

Preparation for employment in general is provided in the opportunities for the acquisition of relevant transferable skills outlined in the programme specification.

Every effort has been made to ensure the accuracy of the information in this programme specification. At the time of publication, the programme specification has been approved by the relevant Faculty Board (or equivalent). Programme specifications are reviewed annually, however, during the course of the academical year, any approved changes to the programme will be communicated to enrolled students through email notification or publication in the *Reporter*. The relevant faculty or department will endeavour to update the programme specification accordingly, and prior to the start of the next academical year.

Further information about specifications and an archive of programme specifications for all awards of the University is available online at: <https://www.camdata.admin.cam.ac.uk/>