

University of Edinburgh MSc Bioinformatics

Available from: <http://www.ed.ac.uk/schools-departments/biology/postgraduate/taught-programmes/bioinformatics/programme-structure>

Overview

This programme lasts 12 months and involves two semesters of teaching followed by an individual research project.

The MSc lasts 12 months but a diploma option is also available. The diploma lasts nine months from September to May and includes only the taught courses. To be awarded an MSc you must also complete a dissertation.

The taught courses are worth a total of 120 credit points.

- [Taught courses](#)

The period of individual research from May to August resulting in the final dissertation is worth a further 60 credits.

- [Research dissertation](#)

Taught courses

You will take several courses run by the School of Biological Sciences and other Schools within the University.

There are four compulsory courses on this programme, including a research proposal and the dissertation. Your remaining 60 credits should be selected from the optional courses offered by the School of Biological Sciences and other Schools within the University. These credits would ideally be spread evenly over the two semesters.

You will choose your courses in consultation with the Programme Director who will be able to advise you according to your academic background and career interests.

Compulsory courses

The majority of students will take the courses listed below, however there may be some flexibility depending on your background.

Compulsory course	Semester	Credits
MSc Dissertation (Bioinformatics)	Summer	60
Bioinformatics Research Proposal	2	20
Bioinformatics Programming and System Management	1	20
Statistics and Data Analysis	1	20

Your research dissertation is worth 60 credits and must be completed by mid-August.

Optional courses

Semester one

You can choose any combination of courses listed below in semester one, timetable permitting.

If you have little or no experience of using bioinformatics tools in modern biology you are advised to take Bioinformatics 1.

Optional course	Credits
Bioinformatics 1	10
Human-Computer Interaction	10
Information Processing in Biological Cells	10
Introduction to Java Programming	10
Molecular Modelling and Database Mining	10
Quantitating Drug Binding	10
Text Technologies	10

Semester two

You can choose any combination of courses listed below in Semester 2, timetable permitting.

Optional course	Credits
Bioinformatics 2	10
Bioinformatics Algorithms	10
Computational Systems Biology	10
Data Mining and Exploration	10
Drug Discovery	10
Functional Genomic Technologies	10
Introduction to Website & Database Design	10
Molecular Phylogenetics	10
Next Generation Genomics	10
Software Architecture, Process & Management	10

Research dissertation

You will undertake a research project and produce a dissertation which will be submitted on an assigned date in mid-August.

From May to August you will undertake a research project and complete a dissertation, provided you have fulfilled the requirements of the taught element of the programme. This exciting opportunity is a vital part of your degree, allowing you to gain valuable research experience in a world-class laboratory.

The research project is carried out independently but with the support of a suitable supervisor. You will be expected to demonstrate your ability to organise and carry out a major piece of work according to sound scientific and engineering principles.

You will present the results in a dissertation which should be 7,000 - 10,000 words long and submitted on or before an assigned date in mid-August.

Choosing your research topic

You will choose your topic in consultation with the Programme Director. Every effort will be made to accommodate your interests and career aspirations.

The Schools of Biological Sciences and Informatics have a large faculty of internationally respected scientists and large communities of enthusiastic research workers. Supervisors in these schools run a wide range of projects, however projects can also be offered in collaboration with other Schools or external commercial and academic organisations.

The most common locations for projects are:

Schools

- [School of Biological Sciences](#)
- [School of Informatics](#)

Institutes

- [Division of Pathway Medicine](#)
- [Institute of Cell Biology](#)
- [Institute of Evolutionary Biology](#)
- [Institute of Immunology and Infection Research](#)
- [Institute of Molecular Plant Sciences](#)
- [Institute of Stem Cell Research](#)
- [Institute of Structural and Molecular Biology](#)
- [MRC Human Genetics Unit](#)
- [Roslin Institute](#)