KEY FACTS

MODE OF STUDY
Full-time: 1 year Part-time: 2 years

All modules, except for Research Planning and Research Dissertation, are taught in a two-week block.

All modes of study have a September start date.

ENTRY REQUIREMENTS
Applicants should have a recent UK honours degree (2.2 or above, or equivalent EU or overseas degree) in the field of Biosciences. Applications from health professionals, eg doctors, nurses and MLSOs are welcomed.

If English is not your first language an IELTS 6.0 or TOEFL 230/750 score is a requirement. Applicants with IELTS 5.5 or equivalent may be accepted onto the programme but will be required to undertake pre-sessional and/or in-sessional English language courses, as directed.

FEES
Up-to-date information about fees is available from our website on: www.brunel.ac.uk/courses/pg/pgfees

SCHOLARSHIPS AND BURSARIES
Up-to-date information about current scholarships and bursaries is available from our website on: www.brunel.ac.uk/courses/pg/funding

ENQUIRIES
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Brunel University
Uxbridge
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UK

Telephone +44 (0)1895 266293
Email biosciences@brunel.ac.uk

Brunel University is research-led and, through our enthusiastic, innovative and research-driven approach, the teaching on this course reflects the fast-changing nature of biomedical research – with specific emphasis to human genome and molecular medicine.

The MSc in Molecular Medicine course aims to provide you with specialist theoretical and practical knowledge and experience of cellular, molecular biology and genetics, and their application to the study of a variety of human diseases. The course will focus on developing research skills and is designed to enable you to develop the ability to become an independent and creative scientist.
MSc in Molecular Medicine

Course Details

The course is offered on a one-year full-time basis, taught over three terms, or on a two-year part-time basis, taught over six terms. You will complete six modules in total. Four modules will each be taught over a two-week period in a ‘block’ mode. These taught modules will not run concurrently, allowing you to focus on one module at a time and will help promote better time management skills. All lecture material will be available via the Brunel website and will be accessible from your home computer. There will be a Research Planning module to develop skills required for your dissertation. A unique Research Dissertation module will then be studied over a nine-month (full-time) or 18-month (part-time) period, to allow you to conduct a detailed investigation into a research question of your choice. If in full-time employment, and attending the course on part-time mode, it may be possible to conduct the research dissertation in the workplace.

Modules

All modules are core. Please check the web for the latest details.

Research Planning
This module aims to develop knowledge and critical awareness of various research methods and appropriate methods of data analysis. You will enhance your skills of designing and evaluating research studies and data presentation.

Clinical Cytogenetics
This module will teach up-to-date practical technologies, methodologies and skills used in clinical cytogenetic laboratories.

Genomic Technologies
This module aims to provide an understanding of the modern biotechnology in both genomics and proteomics, especially the application of microarray technology.

Genomic and Molecular Medicine
This module will introduce you to the principles of translating the knowledge generated through the human genome project into clinical practice.

Molecular Mechanisms of Human Disease
This module aims to provide an understanding of the principles and current knowledge of the signalling pathways that are misregulated in a variety of human diseases. Attention will be given to how knowledge of these signalling pathways and their targets can be used in therapeutic intervention in human disease.

Research in Biosciences is conducted in state-of-the-art facilities with access to all modern molecular genetics techniques and post-genomic technologies.

Research Dissertation
The dissertation allows you to undertake an in-depth study from a choice of research topics and will normally be associated with one of the research centres within Biosciences. If in full-time employment, and attending the course on part-time mode, it may be possible to conduct the research dissertation in the workplace.

Examples of Dissertation Titles
- Immunological aspects of Alzheimer’s disease (AD) and familial dementia.
- Molecular genetics of inherited disorders
- Drosophila genetics.
- Changes to genome organisation during ageing.

Assessment and Awards

The course is structured around a programme of lectures, seminars, practical classes, directed reading and coursework. You will be assessed by written examination, coursework, laboratory reports, oral and poster presentation and dissertation thesis writing.

We have in-house a royal literary fund fellow to aid in writing.

A Master’s degree is awarded if you reach the necessary standard on the taught part of the course and submit a dissertation of the required standard. The Pass grade for all modules and the dissertation is 50%.

A Master’s degree requires 180 credits, of which 75 are accounted for by the dissertation. A Postgraduate Certificate or Diploma can be awarded if between 60 and 135 credits are gained on the course.

Career Opportunities

Our graduates will be highly skilled in a variety of research methodologies and will be equipped for a range of career opportunities. These could include health-related professions, pharmaceutical/biotechnology industries, PhD study or research assistantships in cancer and genomic research.
Course Structure

Full-time 1-Year

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<thead>
<tr>
<th>Autumn Term</th>
<th>Credits</th>
<th>Spring Term</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Research Planning</td>
<td>15</td>
<td>Research Dissertation</td>
<td>75</td>
</tr>
<tr>
<td>Genomic and Molecular Medicine</td>
<td>30</td>
<td>Clinical Cytogenetics</td>
<td>15</td>
</tr>
<tr>
<td>Genomic Technologies</td>
<td>15</td>
<td>Molecular Mechanisms of Human Disease</td>
<td>30</td>
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Part-time Year 1

<table>
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<th>Autumn Term</th>
<th>Credits</th>
<th>Spring Term</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Planning</td>
<td>15</td>
<td>Research Dissertation (start research dissertation)</td>
<td>75</td>
</tr>
<tr>
<td>Genomic and Molecular Medicine</td>
<td>30</td>
<td>Clinical Cytogenetics</td>
<td>15</td>
</tr>
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Part-time Year 2

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<th>Autumn Term</th>
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<th>Spring Term</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Genomic Technologies</td>
<td>15</td>
<td>Molecular Mechanisms of Human Disease</td>
<td>30</td>
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Complete research dissertation

Biosciences Research

The MSc course will be fully integrated into the research activities of the division of Biosciences. Students undertaking their research dissertation will be associated with one of the research centres, under the direct supervision of a research active member of staff.

Centre for Cell & Chromosome Biology
- Genome and Nuclear Structure and Function
- Stem Cell Biology
- Normal and Premature Ageing
- Biomaterials
- Gene Therapy
- Immunity and disease
- Neurodegenerative Diseases
- Microbiology
- Bone Development
- Radiation Biology
- Endocrinology

Centre for Immunology, Infection and Disease Mechanisms
- Setting up clinical trials
- Developing novel therapeutics & diagnostics
- Asthma and autoimmune diseases
- Alzheimer’s disease
- Anti-tumour vaccines
- Reproductive endocrinology

Centre for Systems and Synthetic Biology
(Interdisciplinary Centre with the School of Information Systems, Computing and Mathematics)
- Use of functional genomics and high throughput data to study cellular behaviour and regulation
- Use and development of novel experimental and computational approaches to study and model biological systems
- The development of synthetic biology tools and modified biological systems to study and develop biological systems with novel and useful properties.

Brunel Institute for Cancer Genetics and Pharmacogenomics
- The genetics of breast, prostate, lung and skin cancer
- The role of telomeres in the development of cancer
- The role of DNA repair in the development of cancer
- The identification of new therapeutic targets for the treatment of cancer
Brunel University

We are one of the most optimistic, ambitious and forward-looking universities in the country and we are currently undertaking a £300 million, 10-year spending programme. The campus is based to the west of London, close to Heathrow and to the countryside of the Thames Valley. Brunel is one of the UK’s top universities for sport with a range of world-class facilities. Students are encouraged to take part in recreational and extra-curricular activities to ensure university life is fulfilling and diverse.

Information on the University and its facilities, including accommodation, can be found on the University website or in the postgraduate prospectus. An International Students guide is available for overseas applicants.

For further information about Brunel University, or about accommodation, fees and finance, requirements for entry into the United Kingdom etc, or for a copy of the prospectus, contact:

Course Enquiries
Brunel University, Uxbridge, Middlesex, UB8 3PH
Telephone +44 (0)1895 265599

Every effort has been made to ensure the accuracy of the information in this brochure and the University will take all reasonable action to deliver these services in accordance with the descriptions set out in it. However, the University reserves the right to vary these services, using all reasonable efforts to offer a suitable alternative. All costs, rates and prices stated in this brochure are subject to amendment and should be taken as a guide only.