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Immunology and Immunotherapy MSc

This is a full-time 1 year MSc programme suitable for biomedical or life scientists who wish to acquire an extensive knowledge and key skills relating to the fundamental molecular and cellular regulation of immunity and its application to the treatment of disease. The programme will be delivered by world leaders at the forefront of immunology and immunotherapy research, each with an internationally renowned research group.

Study here and find out why the University of Birmingham has been awarded The Times and The Sunday Times University of the Year 2013-14 (http://www.birmingham.ac.uk/news/latest/2013/09/20-sep-Birmingham-announced-as-University-of-the-Year.aspx)

Course fact file

Type of Course: Continuing professional development, taught

Study Options: Full time

Duration: 1 year Full-Time

Start date: September

Related courses

Inflammation MRes (/postgraduate/courses/combined/med/inflammation.aspx)

Contact

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Details

Over the past few years significant advances have been made in our understanding of the molecular and cellular control of immune responses. These discoveries are now being translated into the design and testing of immunotherapeutic interventions for a range of diseases including cancer, autoimmunity and inflammatory disease. This programme is for biomedical or life scientists who wish to extend their knowledge and skills in both immunology and its translation to immunotherapy.

A series of interlinked taught modules cover molecular mechanisms in immune cell differentiation and function, autoimmunity, transplant and tumour immunology, and inflammation. This is complemented by comprehensive coverage of the latest developments in immunotherapy including the use of microbial products in immunomodulation and vaccination, small molecules and biologics, as well as cellular immunotherapy.

The programme aims to allow you to understand the research process, from the fundamental discoveries at the forefront of immunological research, to the application of novel interventional immune-based therapies.

A key part of the MSc programme is the planning, execution and reporting of a piece of independent study leading to submission of a dissertation. This study will be in the form of an extensive laboratory research project carried out in internationally renowned research groups. Each student will be a fully-integrated member of one of the large number of research teams in a wide variety of topics across both immunology and immunotherapy. We also plan to offer some projects within external biotechnology companies.

Why study this course

This course:

- is run by research scientists at the forefront of immunology and immunotherapy across the Schools of Immunity & Infection and Cancer Sciences
- includes clinical staff who are involved in the delivery of immunotherapy to patients
- can contribute towards career development and open up further career progression opportunities
- provides an exciting opportunity to carry out an extensive research project either within the University or selected external biotechnology companies
- will increase your personal knowledge of the principles of immunology and its application to immune-based therapy of disease

Modules

The content of the programme is broadly divided into two components: the taught modules and the independent research project (dissertation).

Each taught module comprises 15-40 hours of face-to-face taught classroom-based learning plus self-directed learning and an in-course assessed assignment. Towards the beginning of the programme there is a laboratory research methods module and running throughout is a journal club where you present and discuss cutting-edge research publications.

You will have the exciting opportunity to undertake an extensive laboratory research project as a fully-integrated member of one of the large number of research teams in a wide variety of topics across both immunology and immunotherapy. We also plan to offer some projects within external biotechnology companies.

Modules

- **Introduction to Immunology (/postgraduate/courses/taught/med/pg-modules/introduction-to-immunology.aspx)** (10 credits)
- **Laboratory Research Methods in Immunology (/postgraduate/courses/taught/med/pg-modules/laboratory-research-methods-in-immunology.aspx)** (10 credits)
- **Immunology and Immunotherapy Journal Club (/postgraduate/courses/taught/med/pg-modules/immunology-and-immunotherapy-journal-club.aspx)** (10 credits)
- **Molecular mechanisms in immune cell differentiation and function (/postgraduate/courses/taught/med/pg-modules/molecular-mechanisms-in-immune-cell-differentiation-and-function.aspx)** (20 credits)
- **Transplant, autoimmunity and tumour immunology (/postgraduate/courses/taught/med/pg-modules/transplant,-autoimmunity-and-tumour-immunology.aspx)** (20 credits)
- **Inflammation and cell migration (/postgraduate/courses/taught/med/pg-modules/inflammation-and-cell-migration.aspx)** (10 credits)
- **Immunotherapy (/postgraduate/courses/taught/med/pg-modules/immunotherapy.aspx)** : (40 credits) The module will build on basic knowledge provided in previous modules with a focus on applied immunology and translating basic science into safe and effective therapeutics. The module will be divided into four sections: Microbes -immunomodulation and vaccination, Small molecules, Cellular and Biologics
- **Research project in Immunology and Immunotherapy (/postgraduate/courses/taught/med/pg-modules/research-project-in-immunology-and-immunotherapy.aspx)** (60 credits)

Please note: programmes evolve continually to keep them up to date so please check the website regularly for any changes

Fees and funding

2015/16 course fees

UK/EU students: £9,000
Non UK/EU students: £19,750

Learn more about **fees and funding. (http://www.birmingham.ac.uk/students/fees/postgraduate/fees.aspx)**

Scholarships and studentships: International students can often gain funding through overseas research scholarships, Commonwealth scholarships or their home government. Visit our website for information about **scholarships for international students (/International/students/finance/scholarships/index.aspx)**

For further information email **sfo@contacts.bham.ac.uk (mailto:sfo@contacts.bham.ac.uk)**

Entry requirements

Life science or biomedical science degree normally classified at 2(i) or above or equivalent.

International students:

Academic requirements

We accept a range of qualifications, our **country pages (http://www.birmingham.ac.uk/international/students/country/index.aspx)** show you what qualifications we accept from your country.

English language requirements

You can satisfy our English language requirements in two ways:

- by holding an **English language qualification to the right level (http://www.birmingham.ac.uk/students/requirements/requirements-pg/international/index.aspx)**
- by taking and successfully completing one of our **English courses for international students (http://www.birmingham.ac.uk/students/requirements/requirements-pg/international/english-courses.aspx)**

English to IELTS 7.0 (with a minimum of 6.5 in each component).

How to apply

When clicking on the Apply Now button you will be directed to an application specifically designed for the programme you wish to apply for where you will create an account with the University application system and submit your application and supporting documents online. Further information regarding how to apply online can be found on the **How to apply pages (http://www.birmingham.ac.uk/students/courses/postgraduate/apply-pg/index.aspx)**

Apply now (https://pga.bham.ac.uk/lpages/MDS047.htm)

Related links

Immunology and Immunotherapy (/Documents/college-mds/courses/postgraduate/Allflyers-Nov2013-zipped/ImmunologyandImmunotherapy.pdf)

Related news and events

Birmingham excels in world rankings (/news/latest/2014/08/birmingham-excels-in-world-rankings.aspx)

Call to action on antibiotic resistance (/research/our/news/items/antibiotic-resistance.aspx)

Learning and teaching

As a Birmingham student, you will be joining the academic elite and will have the privilege of learning from world-leading experts, as well as your peers. From the outset you will be encouraged to become an independent and self-motivated learner. We want you to be challenged and will encourage you to think for yourself.

This programme is delivered via teaching from Monday to Friday approximately 9am-5.00pm, with only a few hours of direct face-to-face contact each day to allow time for independent learning. During the first part of the research project you will have a single day of taught element modules, with the remaining days carrying out their research. Once the taught modules have been completed the project will be full-time.

You will have access to a comprehensive support system that will assist and encourage you, including personal tutors and welfare tutors who can help with both academic and welfare issues.

Our facilities

The College of Medical and Dental Sciences houses state-of-the art facilities to support a range of teaching, learning and research activity.

Our facilities ensure that students receive the best possible learning experience by working in a modern environment. Among our most recent developments include a refurbishment of the Medical School foyer, Barnes library and Wolfson Centre for Medical Education.

Explore our facilities and take a tour by moving around our 360-degree panoramas:

ERROR:

Adobe Flashplayer 10.1 (or higher) or a
HTML5 Browser with CSS 3D Transforms or WebGL support are required!

Assessment methods

Taught Modules

Modules are assessed through a variety of means including extended essays (up to 3000 words), preparation of a research proposal, preparing and conducting a short presentation on a defined topic related to the module content, and unseen written examination (essays, short answer, MCQ).

Dissertation

This is defined as a substantial body of work containing some new findings or thoughts. It is envisaged that this will be 10,000-15,000 words in length. You will be assigned to a suitable supervisor and agree the nature of the research at the start of their programme.

Employability

Students who complete this MSc programme will have an in-depth up-to-date knowledge of this rapidly advancing field and will have developed the key skills required to either pursue a PhD in these areas or significantly improve their employability for the biomedical, biotechnology and pharmaceutical industrial sectors.

Find out more about where our postgraduate students go (/Documents/college-mds/courses/postgraduate/employability-info/employabilityinfo-ii-jan2014.pdf)

Careers Support for Postgraduates

Careers Network – We can help you get ahead in the job market and develop your career

We recognise that as a postgraduate student you are likely to have specific requirements when it comes to planning for your next career step. Employers expect postgraduates to have a range of skills that exceed their subject knowledge. Careers Network offers a range of events and support services that are designed for all students, including postgraduates looking to find their niche in the job market.

Here are just a few ways in which we can help postgraduates to get ahead:

- Careers Networking opportunities
- Effective careers strategy toolkit
- Year planner for all postgraduate students
- Masters Career Coaching Workshops
- One to one careers guidance

The Careers Network also have subject specific careers consultants and advisers for each College so you can be assured the information you receive will be relevant to your subject area. They also have a dedicated careers website for **international students (https://intranet.birmingham.ac.uk/as/employability/careers/index.aspx)** where you can find useful resources and information.

For more information on the **PG Careers Network (https://intranet.birmingham.ac.uk/as/employability/careers/index.aspx)** contact Jenny Mullins-White at **j.mullins-white@bham.ac.uk (mailto:j.mullins-white@bham.ac.uk)**

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