



University of  
Nottingham

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# MSc Applied Biomolecular Technology

Advanced training for biological, chemical and  
physical scientists (pure and applied)

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International  
quality standards  
of research



Innovative,  
high-tech learning  
environment



Includes industrial  
placement



Advanced training  
for employment





# For careers in sectors including pharmaceutical, healthcare, biomedical and food biotechnology

## Overview

This one year, full-time MSc provides you with advanced training and an opportunity to discover first-hand modern industry's need for skilled biomolecular technologists. This course will train you to analyse the natural and artificially engineered large biomolecules of importance to the pharmaceutical, food, nutrition, healthcare and biomedical industries. This will include training in "patent preferred" biochemical, biophysical and molecular biology technologies.

By the end of the course, you will be conversant with methods of gene cloning and protein engineering central to the biotechnology sector.

A key feature of this course is the three-month industrial placement - an exciting opportunity which will develop your ability to research a subject of industrial or biomedical relevance in depth and give you a full appreciation of what is required by modern industry.

## Content

Through a variety of lectures, tutorial, seminars and laboratory sessions you will learn how knowledge of enzyme, polysaccharide and antibody biotechnology can be applied to solve problems in an industrial and biomedical context. You will gain an understanding of:

- the techniques used to characterize biomolecular structure
- the basic chemistry behind the properties of biomolecules
- the structure, properties and function of industrially and biomedically important macromolecules
- the biological factors that affect protein production

University of Nottingham has made every effort to ensure that the information in this leaflet was accurate when published. Please note, however, that the nature of the content means that it is subject to change from time to time, and you should therefore consider the information to be guiding rather than definitive.

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## Structure

You will take taught modules (120 credits) over the autumn and spring semesters before completing the three-month (60 credits) industrial placement and dissertation project.

## Modules

- Fundamentals of Biomolecular Science
- Basic Laboratory Techniques
- Industrial and Biomedical Macromolecules
- Genetic Analysis and Bioinformatics
- Antibody Biotechnology
- Structural Biology
- Molecular Microbiology and Biotechnology
- Polysaccharide and Drug Delivery Biotechnology

The modules we offer are inspired by the research interests of our staff and as a result may change for reasons of, for example, research developments or legislation changes. This list is an example of typical modules we offer, not a definitive list.

Further information is available at:  
[nottingham.ac.uk/pgstudy/biosciences](http://nottingham.ac.uk/pgstudy/biosciences)

## Entry requirements

You will normally be expected to hold an honours degree (or international equivalent) at 2:2 level or above in a relevant subject area.

Applicants whose first language is not English must also achieve IELTS 6.5 (with no less than 6.0 in any element). Test results should be no more than two years old.

## Find out more

Academic enquiries:  
Dr Jianhua Jia, Course Manager  
[jianhua.jia@nottingham.ac.uk](mailto:jianhua.jia@nottingham.ac.uk)

## Funding your studies

When looking at how to fund your postgraduate studies, it's worth taking the time to research your options, as funding is available from a variety of sources.

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