School of Chemistry
FACULTY OF MATHEMATICS
AND PHYSICAL SCIENCES

UNIVERSITY OF LEEDS

MSc Chemical Biology and Drug Design

A taught Masters course which focuses on using chemical methodology to tackle complex biological and medical problems.

Why Chemical Biology and Drug Design?

The pharmaceutical and biotechnology industries are increasingly requiring researchers with a strong background at the interface between chemistry and biology.

This course is designed to bridge the gap between an undergraduate degree in a core subject, and genuine interdisciplinary research. It will provide you with rigorous training in an exciting area of interdisciplinary science, taught by experts in chemical biology, biophysics and medicinal chemistry using a "problem-based" approach. In addition, visiting lecturers from the pharmaceutical industry provide a unique insight into industrially-relevant applications of chemical biology and medicinal chemistry.

The course takes full advantage of the world-class facilities available at Leeds through an extended interdisciplinary research project supervised by two members of staff with complementary expertise.

Key features

- Accredited by the Royal Society of Chemistry
- Funded scholarship from AstraZeneca
- Unrivalled research facilities in the UK
- Interdisciplinary research project
- Research-led teaching
- 12 months duration

Employment prospects

On graduation, you will be ideally placed to undertake interdisciplinary research in academia or industry. In addition, you will also be in a strong position to pursue a range of science-related careers such as patent work, scientific publishing or scientific administration.

Many of our graduates have secured positions on chemical biology and medicinal chemistry PhD programmes in the UK and internationally.

The University of Leeds hosts a wide range of PhD programmes incorporating chemical biology, offering many opportunities for students graduating from this course.

Entry requirements

Application are welcome from students with a first or upper second class degree, or the overseas equivalent, in chemistry, biochemistry or a related subject.

"Science policy is a hard area to break in to and my Masters in Chemical Biology was crucial in securing my job at the Royal Society of Chemistry"

Hannah Taylor
Graduate

Course structure

Please note: The module lists below are indicative of the course content, but available modules are subject to change.

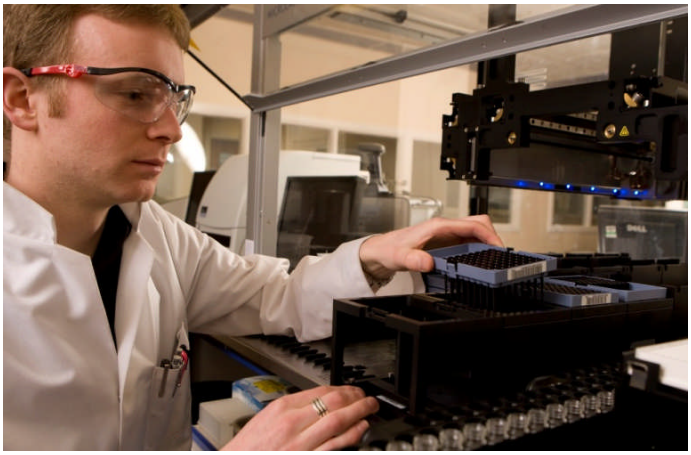
Compulsory modules	Credits
Fundamentals of Chemical Biology	15
The Medicinal Chemistry of Drug Development	10
Chemical Biology Tools and Concepts	10
Advanced Medicinal Chemistry	10
Emerging Topics in Chemical Biology	25
Extended Laboratory Project in Chemical Biology	90

As well as the compulsory modules you will be able to choose two optional modules from the above list to make up a total of 20-25 credits.

Optional modules	Credits
Computational Biology of Genes and Proteins	15
Advanced Organic Synthesis for Fine Chemical and Pharmaceutical Synthesis	10
Bodily Functions: The Inorganic Workings of the Body	10
Stereoselective and Asymmetric Synthesis	10
Self-Organising Molecular Systems	10
Light, Chemical Change and Life	10

You will need a minimum of 150 credits overall for the degree award to be made.

There is strong emphasis on continual assessment using a wide range of formats, including oral presentations; the preparation of short articles, essays and research reports; performing computational exercises and undertake group-based problem solving activities.



Project and dissertation

The focal point of the course is the interdisciplinary research project involving two supervisors with complementary expertise. With the core modules behind you, you will be ideally positioned to choose an exciting problem to investigate.

The breadth of expertise available at Leeds means that you will be able to combine a wide range of techniques: from computational ligand design to synthesis, protein engineering and laser spectroscopy.

You will receive training in the generic skills that are required including scientific writing and giving oral presentations and undertake a programme of directed reading before writing an initial report.

You will spend over four months in the research laboratories of your supervisors, working alongside PhD students and experienced postdoctoral researchers.

During the research project you will have access to the outstanding research facilities in chemical biology and medicinal chemistry that are available in Leeds.

Industry links

This course has been strongly supported by the research councils and the pharmaceutical industry. The course was established using substantial funding from EPSRC and further investment in the course has been made by BBSRC, AstraZeneca and GSK. Currently, the course enjoys financial scholarship support from AstraZeneca.

AstraZeneca

Further information

For more information about the course and how to apply please visit the web site:
www.chembio.leeds.ac.uk

or contact the Programme Manager:
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