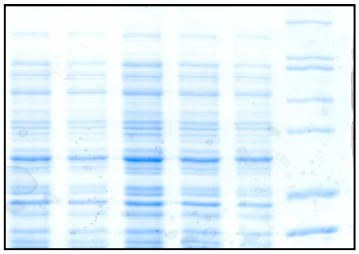
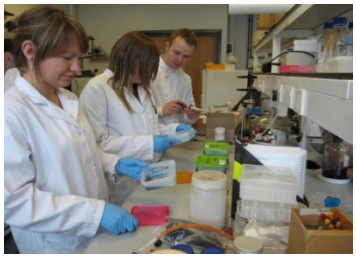
Division of Biomedical and Life Sciences Degree Schemes

BSc Biochemistry with Biomedicine (Honours)

BC79





The Biochemistry with Biomedicine course is aimed at students with a broad interest in the molecular processes of life and how these are altered by disease. It also involves the study of how knowledge of biochemistry can be used to develop treatments for such diseases. The course includes core subjects in biochemistry and biomedicine and also other subjects such as cell biology, genetics and physiology which are at the heart of modern biochemical and medical research. We have extensive links with hospitals, at the local and national level, both in research activities and in the teaching on some of the more biomedical based courses.

Entry requirements. Typically ABB at A-level for entry from the sixth form with at least two science subjects from Biol / Chem / Geog / Maths / Phys / Psych and a minimum of AS-level chemistry, or equivalent 2A- plus 2AS-levels. Applicants with other types of qualification should enquire for details.

Specialist facilities. Biochemistry is at the heart of Lancaster University's research and teaching priorities. The university has a long history of highly rated biological research at the biochemical and molecular level and the Division of Biomedical and Life Sciences in the School of Health and Medicine is ranked joint 1st in the UK for Allied Health Professions and Studies research. Current interests include cellular response to DNA damage, molecular analysis of corneal transparency, proteins involved in the lubrication of joints, molecular mechanisms of neuron destruction in Alzheimer's disease, food poisoning bacteria, and cellular signalling. Due to our high level of research funding and activity in these areas, our students are exposed to up-to-date research facilities and have a wide choice of final year projects. They are also able to use facilities such as the bioimaging facility containing confocal, atomic force and electron microscopes. Lectures, practicals and workshops will take place in our state-of-the-art teaching facilities.

Careers information. This degree will provide an excellent platform for research based careers in biochemistry, including further postgraduate study for MSc or PhD qualifications. In addition there are many opportunities in the pharmaceutical industry, the food industry, forensic science and research institutes that are accessible to our Biochemistry graduates. Traditionally our graduates enter a wide range of careers and the transferable skills acquired during this degree will make the graduate attractive to employers in many other areas such as management, finance and marketing.

Michael Whitehead:

"I have really enjoyed the first two years I have spent at Lancaster University. All of the staff are always willing to help and answer any questions. The course itself is extremely interesting and the research-based teaching means I will be equipped to pursue a career in research. I would recommend studying biochemistry at Lancaster University to anyone!"

Further information contact:

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School of Health & Medicine

Year 1

In the first year of the degree, students take a total of 15 modules (shown below). Due to the specialized nature of this degree scheme all of these modules are compulsory and cover a range of biochemical and biomedical subjects. Assessment is through coursework, end-of-module tests and summer examinations.

- **Molecules of Life**
- **Cell Structure & Function**
- **Genetics**
- **Biotechnology**
- **Protein Biochemistry**

- **Impact of Microbes**
- **Anatomy & Tissue Structure**
- **Infection & Immunity**
- **Hormones & Development**
- **Human Physiology**
- **Biomedicine & Society**

- **Experimental Design & Data Management**
- **Physical Chemistry for Life Sciences**
- **Organic Chemistry**
- **Spectroscopy & Bioinorganic Chemistry**

Year 2

In the second year of the degree students again take a range of compulsory modules (Group A below) designed to provide a detailed understanding of biochemistry, biomedicine and associated research techniques. They must also select one module from Group B. Modules are assessed through coursework, end-of-module tests and examinations. Exams take place in the summer term of the second year.

Group A (Compulsory)
- Biochemistry
- Biochemical Techniques
- Cell Biology
- Cell Biology Techniques
- Medical Microbiology
- Genetics
- DNA Technology

Group B (One Selection)
- Microbiological Techniques
- Practical Physiology

Year 3

In the final year of the degree students can choose to undertake a research project or a combination of laboratory project and literature review. They must also take the compulsory module combination shown in Group A (below) in addition to two further modules from group B and one module from each of groups C and D. Exams take place in the summer term of the final year.

Group A (Compulsory)
- Cell Signalling 1 **OR** Cell Signalling 2
- Immunology
- Protein Biochemistry
- Ethics in Biomedicine
- Molecular & Biochemical Parasitology

Group B (Two Selections)
- Cell Signalling 2
- Medical Genetics
- Tropical Diseases
- Phase Equilibria & Thermodynamics

Group C (One Selection)
- Cell Signalling 1
- Genetics
- Electrochemistry & Kinetics

Group D (One Selection)
- Biology of Ageing
- Environmental Pathogens
- Organic Photochemistry