

BC98 Biomedical Sciences



Robert Wilkins
Course Director

<http://www.medsci.ox.ac.uk/study/bms>

University of Oxford
MEDICAL SCIENCES DIVISION

ABOUT US DEPARTMENTS RESEARCH STUDY SUPPORT & SERVICES GET INVOLVED NEWS EVENTS

Biomedical Sciences

ABOUT THE COURSE
The three-year undergraduate course in Biomedical Sciences is a broad and flexible programme, ranging from genetics and molecular and cellular biology to integrated systems physiology, neuroscience and psychology. Depending on the options chosen in the second and third years, students graduate with a B.A. degree in either Cell and Systems Biology, or in Neuroscience. [Find out more](#)

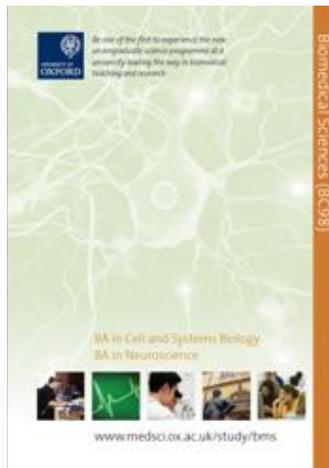
APPLYING
Information on the admissions process, including open days, introductory reading, selection criteria, and interviews. [Find out more](#)

FAQS
I did better than expected in my A-levels. Does Oxford University take part in the clearing and adjustment process?
Can I apply for deferred entry to Biomedical Sciences?
Can I start at Oxford before my 18th birthday?
Can I transfer in from another university?
English is not my first language. Is there any language requirement for entry?
[More FAQs](#)

COURSE BROCHURE
[Download](#)

CONTACT US
Medical Sciences Teaching Centre
South Parks Road
Oxford OX1 3PL
bmsadmissions@medsci.ox.ac.uk

Course leaflet



Biomedical Sciences at Oxford

- a 3-year course, replacing Physiological Sciences and PPP (Physiology + Psychology)
- more chemistry, physics and mathematics
- more molecular: integration of biological and molecular processes underlying modern biomedical science
- focus on research: the experimental basis for our current understanding
- two BA degree outcomes:
Cell and Systems Biology OR Neuroscience

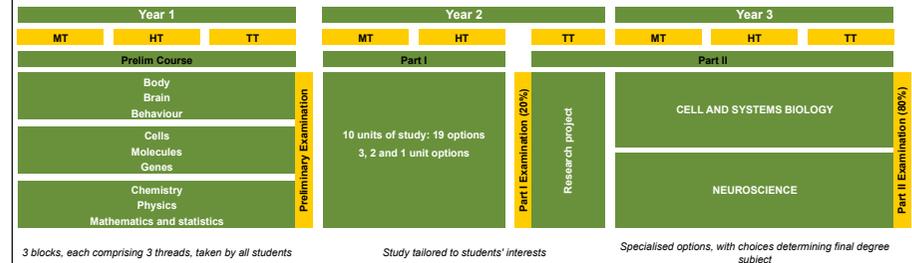
What can you do with it?

BA degree



Graduate study
 taught/research M.Sc.
 Ph.D project
**Pharmaceuticals/
 biotechnology**
Graduate-entry Medicine

Course structure



Teaching Centre

University teaching takes place in a purpose-built £8m teaching centre, that contains a lecture theatre and seminar rooms practical classrooms and CAL facilities



Part I: select 10 units

3 unit option

- Immunology and Microbiology

2 unit options

- *Behavioural Neuroscience*
- Cellular Pathology
- *Cognitive Neuroscience*
- Developmental Biology
- *Developmental Psychology*
- Endocrinology
- General Pharmacology
- Integrative Systems Physiology
- *Memory, Attention and Information Processing*
- Molecular Biology
- *Personal, Individual Differences and Psychological Disorders*

1 unit options

- Auditory Neuroscience
- Cellular Physiology
- Genes, Circuits and Behaviour
- Neuropharmacology
- Protein Structure
- Second Messengers and Cascades
- Visual Neuroscience

Italicised options: one required if studying Neuroscience at Part II

Course structure

| Year 1 | | | Year 2 | | | Year 3 | | |
|--|----|----|--|----|----|---------------------------|----|----|
| MT | HT | TT | MT | HT | TT | MT | HT | TT |
| Prelim Course | | | Part I | | | Part II | | |
| Body Brain Behaviour | | | 10 units of study: 19 options 3, 2 and 1 unit options | | | CELL AND SYSTEMS BIOLOGY | | |
| Cells Molecules Genes | | | | | | | | |
| Chemistry Physics Mathematics and statistics | | | Part I Examination (20%) Research project | | | Part II Examination (80%) | | |

3 blocks, each comprising 3 threads, taken by all students

Study tailored to students' interests

Specialised options, with choices determining final degree subject

Part II

| (CELL AND SYSTEMS) NEUROSCIENCE | MOLECULAR MEDICINE | CARDIOVASCULAR, RENAL, AND RESPIRATORY BIOLOGY | INFECTION AND IMMUNITY | CELLULAR PHYSIOLOGY AND PHARMACOLOGY |
|---|---|--|---|---|
| Ion channels Synaptic transmission Sensory processing Synaptic plasticity Circadian neuroscience Degeneration, regeneration and repair Biology of brain disorders Sensorimotor integration | Gene regulation Molecular genetics of disease Fertilisation and early development Embryonic patterning Brain development Chromosome biology Genes, development and cancer Molecular and cellular therapies | Cardiac electricity and rhythm Cardiac signals, modulators and metabolism Endocrine and local control of the circulation Cardiovascular performance and pathology Neurobiology of breathing Gas exchange in health and disease Integration of cellular transport mechanisms Renal regulation of homeostasis | Innate and adaptive immune responses Leukocyte activation and inhibition Microbial pathogenesis Development immunology Virology Inflammation biology Molecular parasitology HIV and AIDS | Receptors and signals Signalling and subcellular structure Intracellular calcium signalling Transport of ions and non-electrolytes Time-dependent signalling Brain signalling Cellular sensing Growth and metabolic signalling |
| EXPERIMENTAL PSYCHOLOGY | | | | |
| Anxiety and psychosis Attention and multisensory perception Attention: development and disorders Cognitive and biological factors in personality Colour vision Computational neuroscience Conscious awareness Education and psychology Emotion, appraisal and feedback Gambling: cognitive and biological factors Language acquisition Learning theory Mathematical development Mind and brain in cognitive neuroscience Mood and anxiety disorders Neural basis of decision making Reading and language Vision, brain and development | | | | |

Part II

- students study for one of two degree outcomes
 - Cell and Systems Biology
 - Neuroscience
- they study Advanced Options from Faculties of Physiological Sciences and Psychology
 - teaching is shared with EP and Medicine students
- the pattern of advanced options studied determines which degree is awarded

Course structure

| Year 1 | | | Year 2 | | | Year 3 | | |
|--|----|----|--|----|----|---------------------------|----|----|
| MT | HT | TT | MT | HT | TT | MT | HT | TT |
| Prelim Course | | | Part I | | | Part II | | |
| Body Brain Behaviour | | | 10 units of study: 19 options 3, 2 and 1 unit options | | | CELL AND SYSTEMS BIOLOGY | | |
| Cells Molecules Genes | | | | | | | | |
| Chemistry Physics Mathematics and statistics | | | Part I Examination (20%) Research project | | | Part II Examination (80%) | | |

3 blocks, each comprising 3 threads, taken by all students

Study tailored to students' interests

Specialised options, with choices determining final degree subject