

Welcome to Life Sciences at Brunel

A dark blue circular logo with the text "Discover Brunel" in white, bold, sans-serif font.

Congratulations on securing your place at Brunel

We're looking forward to meeting you - either in person or online - and introducing you to life at Brunel.

To help us get started, we've put together a short activity and some further information to help you prepare for your course - including a snapshot of the topics you'll cover and useful resources.

If you have any questions please email chmls-tpo-lifesciences@brunel.ac.uk.

Pre-arrival activity

We'd like you to complete a short activity before you join us. We can discuss your answers in one of your first personal tutor sessions. Your work will not be officially assessed however it will allow your tutor to get to know you better.

Welcome to the Life Sciences BSc programme! You'll be taking an inter-disciplinary approach to studying the structure and behaviour of living organisms, their organisation, life processes, and relationships to each other and their environment.

The UK Biobank is a major health resource which takes an interdisciplinary approach to improve the prevention, diagnosis and treatment of a wide range of serious and life threatening illnesses – including cancer, heart diseases, stroke, diabetes, arthritis, osteoporosis, eye disorders, depression and forms of dementia.

View this [video](#) and think about how you might go about investigating the contributions of genetic predisposition and environmental factors, including a person's nutrition and lifestyle, to the development of disease.

Sample lecture topics

1. **Biochemistry:** How is energy produced in the cell? What are genes and how is the genetic information translated to different proteins?
2. **Molecular and Cellular Biology:** How do bacteria and viruses affect human health? Describe the life cycle of bacteria and viruses.
3. **Physiology:** Describe the cardiac cycle and the relationship among the contraction of each of the chambers, the opening and closing of valves, the pressure in each of the chambers, the phases of the electrocardiogram, and the heart sounds.
4. **Psychology:** Summarise and assess key experimental findings and theories within the five principal areas of cognitive psychology: attention, perception, memory, language, and cognitive control.
5. **Biosphere and Ecology:** Explain how evolution by natural selection influences ecosystems.

Reading list

- **Biochemistry:** Biochemistry: Jeremy M. Berg, Lubert Stryer, John Tymoczko, Gregory Gatto
- **Molecular and Cellular Biology:** Molecular Biology of the Cell, Bruce Alberts, Alexander D. Johnson, Julian Lewis, David Morgan, Martin Raff, Keith Roberts and Peter Walter. Garland Scientific.
- **Anatomy and Physiology** VanPutte, C. L., Regan, J. L., Russo, A. F., Seeley, R. R., Stephens, T. D., & Tate, P. (2020). Seeley's anatomy & physiology (12th Edition). New York, NY: McGraw-Hill Education.
- **Cognitive Psychology:** Ward, J. (2015). The Student's Guide to Cognitive Neuroscience (3rd edition). Hove: Psychology Press.
- **Biosphere and Ecology:** Textbook: Cresser, M. et al. (2012). Introduction to Environmental Science: Earth and Man. Pearson. ISBN-10: 9780131789326

We look forward to meeting you in Welcome Week (Monday 21 – Friday 25 September).

Life Sciences Team



Find out more about Welcome Week
brunel.ac.uk/welcome-week

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