## Module Catalogue Life Sciences Postgraduate Study Abroad 2025/6 Semester 1

| **Module Code** | **Module Name** | **Level** | **Semester** | **UK Credit Value** |
| --- | --- | --- | --- | --- |
| **Life Sciences** | | | | |
| 7BIOL001W | [Fermentation Technology](#7BIOL001W) | 7 | Semester 1 | 20 |
| 7BIOM007W | [Cellular Haematology](#7BIOM007W) | 7 | Semester 1 | 20 |
| 7BIOM020W | [Immunopathology](#7BIOM020W) | 7 | Semester 1 | 20 |
| 7BIOM041W | [Bioinformatics](#7BIOM041W) | 7 | Semester 1 | 20 |
| 7BIOT002W | [Sustainable Biotechnology](#7BIOT002W) | 7 | Semester 1 | 20 |
| 7HMNT015W | [Postgraduate Research Methods for Health Sciences I](#7HMNT015W) | 7 | Semester 1 | 20 |
| 7HMNT020W | [Essentials of Nutrition and Performance](#7HMNT020W) | 7 | Semester 1 | 20 |
| 7HMNT026W | [Well-Being and Resilience in the Workplace](#7HMNT026W) | 7 | Semester 1 | 20 |

## Life Sciences

### Fermentation Technology

[**Module Code: 7BIOL001W**](#7BIOL001W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

Different media for small- and large-scale production of fermentation products, microbial strain/culture selection and development, microbial culture, sterilisation, modes and types of fermentation, oxygen requirement for culture, fermentation control systems, mixing, rheology, fermenter types and designs, scale-up/down.  
**Assessment:** Coursework Practical (60%), Coursework Practical (40%)

### Cellular Haematology

[**Module Code: 7BIOM007W**](#7BIOM007W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

This module will discuss haemopoiesis in detail, including the role of haemopoietic stem cells and progenitors. The module content includes detail on the structure and roles of leucocytes and erythrocytes, including haemoglobin structure and function. The pathophysiology of anaemia (nutritional and haemolytic), including discussion of haemoglobinopathies will also be covered in this module. Haematological malignancies will also be an important feature of the module, including chronic and acute leukaemia as well as myelodysplastic and myeloproliferative disorders. Both clinical and laboratory aspects will be considered.   
**Assessment:** Essay (25%), Presentation Group (25%), Portfolio (50%)

### Immunopathology

[**Module Code: 7BIOM020W**](#7BIOM020W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

This module comprises lectures and case studies to give an understanding of modern advances in immunology and immunopathology, strategies for the diagnosis of inherited and acquired immunological disorders. The module aims to analyse modern concepts on the interface between innate and adaptive immune responses to intracellular and extracellular pathogens; to discuss and to illustrate cellular and molecular mechanisms of hypersensitivity and autoimmunity, primary and secondary immunodeficiency, transplantation of organs and tissues, anti-tumour immunity. Applications of modern methods of diagnosis of immunopathological disorders are presented in relation to current advances in fundamental and clinical immunology and immunopathology  
**Assessment:** Multiple-Choice Question Test (50%), Coursework Practical (50%)

### Bioinformatics

[**Module Code: 7BIOM041W**](#7BIOM041W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

Bioinformatics lies at the heart of modern biology. This module introduces the discipline and shows how bioinformatics can help answer practical questions and solve problems in biology, medicine and pharmacology. Topics include DNA and protein databases, DNA and protein sequence alignment, protein structure prediction, drug discovery and molecular modelling.  
**Assessment:** Presentation (15%), Coursework (35%), Coursework Practical (50%)

### Sustainable Biotechnology

[**Module Code: 7BIOT002W**](#7BIOT002W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

The module will explore applications of bacterial, fungal, and mammalian culture to the production of bio-products (e.g. enzymes, biopharmaceuticals etc.) and examine ways in which microorganisms are applied in the solution of environmental problems. The latest trends in the improvement of plant yield, tolerance to water/drought stress and pests as well as the use of plants as bioreactors will also be covered.  
**Assessment:** Coursework (20%), Essay (80%)

### Postgraduate Research Methods for Health Sciences I

[**Module Code: 7HMNT015W**](#7HMNT015W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

The purpose of this module is to teach the principles and practice of research with a focus on qualitative and quantitative study designs and methods of data collection and processing. It will show how these designs and methods can be applied to evaluation studies as well as to research. It will provide a supportive and intellectually challenging environment within which students develop their knowledge, understanding and skills as researchers.  
**Assessment:** Essay (50%), Coursework Practical (50%)

### Essentials of Nutrition and Performance

[**Module Code: 7HMNT020W**](#7HMNT020W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

Sound nutritional practices based on scientific research form the platform for athletic performance. This module provides students with an overview of the role of nutrition in regulating physiological processes associated with sport and exercise performance. Nutritional requirements and recommendations for physically active individuals are covered. The module also allows students the opportunity to assess the efficacy of nutritional strategies intended to enhance athletic performance.   
**Assessment:** Coursework (50%), Coursework (50%)

### Well-Being and Resilience in the Workplace

[**Module Code: 7HMNT026W**](#7HMNT026W_return)

**Level 7**

**Semester 1**

**Location: Cavendish**

**UK Credit Value: 20**

This module will explore wellbeing and resilience interventions and programmes in workplace settings.  Students will explore both the generic and specific issues that diverse professions and organisations are facing in relation to stress, wellbeing and resilience.  They will also develop the skills and attributes needed to consult, design, deliver and evaluate bespoke workplace programmes that are both fit for purpose and evidence informed.  
**Assessment:** Coursework (50%), Coursework (50%)