

## **Biomedical Science BSc (Hons) module details**

### **Year 1**

Year 1 provides students with the fundamental framework of biomedical science in human health.

#### **Professional & Practical Skills**

An introduction to clinical lab skills, from benchwork, to professionally analysing and communicating your findings.

#### **Chemistry & Biochemistry**

Starting at a molecular level, this module examines the basic principles of chemistry and biochemistry that apply to healthcare, such as genetics and mechanisms behind diagnostic tests.

#### **Anatomy & Physiology**

Building on the molecular knowledge, this module covers the basics of key organ systems and relevance in human health and disease.

#### **Microbiology**

Microbiology goes beyond human cells, and starts to cover bacterial and viral cells, covering global infectious disease.

### **Year 2**

Building on the topics from first year, in second year students start to appreciate the deeper complexities of biomedical science, exploring state-of-the-art research techniques and the role of biomedical science in diagnosis, preventing, and treating disease.

#### **Genetics & Molecular Pathology**

This module will integrate genetics and genomic into the context of human health, laboratory techniques, and inheritance.

#### **Emerging Techniques**

Introducing the principles, operation, and application of research and diagnostic techniques essential for biomedical research and diagnostics.

## **Organ Systems Physiology**

Building on from the Anatomy & Physiology module, students will further explore diagnostic tests and organ systems, focusing on disease states.

### **Human Health & Immunity**

Combining an introduction to immunobiology and inflammatory processes and disorders, this module develops students understanding of a number of disease processes and therapeutic approaches.

## **Optional Sandwich Placement Year**

Students may apply for a supervised placement in a clinical, industry, or research laboratory, to gain valuable work experience, or (clinical labs only) to complete their IBMS training portfolio to become eligible for later HCPC registration.

## **Year 3**

In third year, modules are designed in line with the clinical specialties of biomedical science laboratories, allowing students to combine and apply their knowledge with real-world relevance.

## **Research Projects**

Pursuing a topic of their interest, students will be supported to design and conduct their own research project, generating, interpreting, and presenting their research.

## **Blood Science**

Students will apply biochemistry and cell physiology to the diagnosis and monitoring of blood related disorders and disease.

## **Infection & Immunity Sciences**

Covering microbiology, public health, and the immune system, students study the related diagnostic techniques and therapeutic strategies employed in this field.

## **Cell Sciences**

Giving students an appreciation of clinical genetics and cellular pathology, this module will develop students' understanding of the molecular mechanisms involved in underlying disease processes.