Medical Biochemistry, BSc (Hons)

[Medical Biochemistry, BSc (Hons) - Swansea University](https://www.swansea.ac.uk/undergraduate/courses/medicine/medical-biochemistry-bsc-hons/)

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| **Duration:** 3 years full-time  **Tuition Fees:** Year 1 £21,650 (September 2024)  *Please note that tuition fees are subject to an increase of 3% each year.* [*Info here*](https://www.swansea.ac.uk/international-students/my-finances/) | **Entry Points:**  September **(In person only)** |
| **Entry Requirements:** ([Check Equivalencies for your Country](https://www.swansea.ac.uk/media/Non-EU-entry-requirements-2018.pdf))   * A Level AAB – BBB including Chemistry with a second STEM subject (i.e. Biology, Physics, Maths, Psychology) – Foundation year available * IB 32-34 including HL6 in Chemistry with HL6 in a second STEM subject. * Minimum of grade C at GCSE (or equivalent) in Maths | |
| **English Language Requirement:** IELTS 6.0 with no less than 5.5 in all components (or Swansea University recognised equivalents) [Check Swansea University Approved Tests and Qualifications here](https://www.swansea.ac.uk/admissions/english-language-requirements/) | |

***Suitable entry requirements as guidance – eligibility can only be confirmed once a full application has been received and reviewed.***

**Important things to note:**

* We are 1st in Wales for Biomedical Sciences (Guardian 2024) & 12th for Biomedical Sciences (Complete University Guide 2024).
* **This degree is a Pathways to Medicine programme.** Students on this program will have the opportunity to secure a guaranteed interview to the Graduate Entry Medicine program providing they have completed the relevant employability pathway (Medical Science in Practice) and meet the minimum entry requirements at the time of applying.
* For students interested in a research career this degree is available as a MSci (4-year combined masters programme). Students choosing MSci will need to meet a slightly higher entry requirements and will have advanced research training in the final year ([Medical Biochemistry, MSci (Hons) - Swansea University](https://www.swansea.ac.uk/undergraduate/courses/medicine/medical-biochemistry-msci-hons/))
* We hold research talks with Swansea University staff and guest expert speakers from other universities, including industry, NHS, and research institutions.

**What is this programme about?**

* Learn about the chemical processes that occur within living organisms and study how cells work at the sub-cellular and molecular levels.
* Understand the biochemical function of living organisms, particularly animals and humans.
* Develop excellent analytical and project management skills and learn how to design experiments and plan work programmes.
* State-of-the-art facilities including bioanalytical equipment such as High-Performance Liquid chromatography, Gas Chromatography, Mass Spectrometry, DNA and protein analytical equipment, computer-based image analysers for molecular or cellular studies.

**Example Topics Within the Programme:**

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| * Energy and Metabolism: The Reactions of Life * Organic Chemistry: An Introduction for Life Sciences. * Tissue Engineering & Regenerative Medicine * Chemical Analysis: from Composition to Structure Elucidation; an Introduction for Life Sciences. * Doctors, Patients and the Goals of Medicine | * Chemistry for Biochemists * Techniques in Molecular Biology * Human Physiology * Human Immunology * Introduction to Neuroscience * Clinical Biochemistry & Physiology * Fundamental Genetics and Evolution | * Membrane Trafficking * Practical Quantitative Research * Nucleic acids: components, metabolism, and modification * Human Immunopathology * Microbiology * Advanced Biostatistics * Membranes & Energy Transduction * Human and Medical Genetics * Genetics of Cancer |

**Employability – Example of roles after graduation:**

* Medicine & Health Professions
* Diagnostics
* Pharmaceutical Development
* Bioinformatics
* Veterinary sciences