Biochemistry, BSc (Hons)

[Biochemistry, BSc (Hons) - Swansea University](https://www.swansea.ac.uk/undergraduate/courses/medicine/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
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| **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 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 ([Biochemistry, MSci (Hons) - Swansea University](https://www.swansea.ac.uk/undergraduate/courses/medicine/biochemistry-msci-hons/))
* Exposure to regular research talks with Swansea University staff and guest expert speakers from other universities, industry, the NHS and research institutions.

**What is this programme about?**

* On this Biochemistry program students will learn about the chemical processes that occur within living organisms and how cells work at the sub-cellular and molecular levels.
* Gain an in-depth understanding of the biochemical function of living organisms, from bacteria to plants, animals, and humans. Develop project management skills, design experiments and plan work programmes.
* 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

**Examples of Topics Within the Programme:**

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| * Fundamental Genetics and Evolution
* Chemistry for Biochemists
* Energy and Metabolism: Reactions of Life
* Microbiology
* Tissue Engineering and Regenerative Medicine
* Chemical Analysis: from Composition to Structure Elucidation; an Introduction for Life Sciences
 | * Human Physiology
* Metabolic Regulation: Enzymes & Signal Transduction
* Techniques in Molecular Biology
* Clinical Biochemistry & Physiology
* Membranes and Energy Transduction
* Infectious Diseases
* Nucleic acids: components, metabolism and modification
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**Employability – Example of roles after graduation:**

* Biochemist/ Biomedical Scientist (with further training)
* Academia
* Pharmaceutical Development
* Industrial Biotechnology
* Biofuels
* Bioinformatics