Genetics, BSc (Hons)

[Genetics, BSc (Hons) - Swansea University](https://www.swansea.ac.uk/undergraduate/courses/medicine/genetics-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 Biology with a second STEM subject (i.e. Chemistry, Physics, Maths, Psychology) – foundation year available. * IB 32-34 including HL6 in Biology 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 2nd in the UK for learning opportunities, 5th for teaching and 11th for overall satisfaction (National Student Survey 2022).
* 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 ([Genetics, MSci (Hons) - Swansea University](https://www.swansea.ac.uk/undergraduate/courses/medicine/genetics-msci-hons/))

**What is this programme about?**

* Studying genetics is exciting and fast-moving, which that is making huge impacts in a range of scientific areas, including the understanding and treatment of diseases, pharmaceutical development, evolution, and the conservation of biodiversity.
* Gain in-depth knowledge of these fundamental building blocks of all life on earth. Including techniques for analysing gene expression, protein interactions, DNA structure & damage, image analysis of biomolecules & cells, and advanced computer analytical methods.
* Develop excellent analytical and project management skills and learn how to design experiments and plan work programmes
* State-of-the-art facilities including DNA, protein analytical equipment, and computer-based image analyser for molecular and cellular studies.

**Example Topics Within the Programme:**

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| * Fundamental Genetics and Evolution * Population Genomics * Energy and Metabolism: The Reactions of Life * Microbiology * Digital Health * Epigenetics, Gene Regulation and Disease * Infectious Diseases * Genetics of Cancer | * Human Physiology * Molecular Evolution * Techniques in Molecular Biology * Human and Medical Genetics * Microbial Molecular Genetics * Practical Quantitative Research * Animal Development * Genetic Toxicology |

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

* Medical Research/ Academia
* Pharmaceutical Industry
* Genetic Counselling
* Clinical & Health Sciences
* Scientific Writer
* Bioinformatics