

NUS Computational Biology students go on to a wide range of careers!

Data-intensive biology is becoming the norm; genomic data is predicted to soon become the single largest source of data in the world. The computational biology revolution is transforming healthcare, pharmaceutical research, environmental sciences, and agriculture

NUS Computational Biology graduates are in demand to meet the growing needs of these fields as well as to pursue postgraduate studies.

Our graduates have gone on to become:

- Researchers in the pharmaceutical and biotechnology industries;
- Ph.D. students in bioinformatics, computer science, and biology;
- Data analysts and data scientists in diverse industries;
- Software engineers;
- Entrepreneurs;
- Developers;
- etc.

These examples are just a sampling. Computational Biology graduates often have a range of options, and growing demand for qualified graduates is expected to continue.

Front image: Our student, Marcus Lee captured in Augmented Reality with a protein structure on an Android app written by another computational biology student, Lee Ning Yuan.



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To be admitted into the Computational Biology programme, candidates should satisfy the following criteria:

- Admission into the Faculty of Science;
- A good H2 pass or equivalent in Mathematics or Further Mathematics; and
- A good H2 pass or equivalent in either Biology or Chemistry.

Students who do not meet all of these requirements may in some cases be admitted to the programme and be required to take appropriate bridging modules.

Polytechnic graduates with strong results in accredited diplomas, and students from other programmes with discretionary admission, may also apply.

For more information and application details, please visit <http://www.science.nus.edu.sg/compbio> or contact us at compbio@nus.edu.sg.

Computational Biology

A direct admission Bachelor of Science (Hons) degree programme at the exciting interface of Life Sciences and Computer Science



Why choose Computational Biology @ NUS?

If you have been hearing about...

- How DNA sequencing is transforming the practice of medicine;
- How disease outbreaks are mapped and traced to their origins;
- How computer models are used to simulate biological processes;
- How Deep Learning and Artificial Intelligence are helping physicians make better decisions;
- How research labs have more data than they can handle...

And you want to go deeper, then NUS Computational Biology degree programme may be just right for you!

Computational Biology is probably the fastest-growing area of Life Sciences. The NUS Computational Biology degree programme, offered by the Faculty of Science with the involvement of *eleven* departments across *three* faculties, is a well-established, integrative major programme for students who wish to enter or advance in this exciting field.

The Computational Biology course plan

In the first two years of the course, Computational Biology students take modules alongside their classmates in Life Sciences, Computer Science, and other quantitative majors. The foundation laid in these first two years gives students the tools to specialise in Years 3 and 4, where more research-based learning takes place. The capstone of the major is a Final Year Project done with a professor in the programme, or a Final Year Internship in industry.

Years 1 and 2

- Foundational modules in life sciences, mathematics, and statistics
- Foundational modules in computer science
- Introductory bioinformatics
- Electives to provide breadth

Years 3 and 4

- Genomic data analysis
- Mathematical methods in genomics
- Advanced modules in computer science, statistics, and life sciences
- Computational biology research projects
- A final year project or internship

COMPUTATIONAL BIOLOGY (est. 2004)

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Genomic data is predicted to soon become the single biggest source of data in the world, surpassing all video data (e.g. Youtube) and all astronomical and space exploration data!!