

LIFE SCIENCES FAQs

NUS e-OPEN HOUSE 2020

[COURSE FEATURES](#)

[UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAMME IN SCIENCE \(UROPS\)](#)

[HONOURS CRITERIA AND REQUIREMENTS](#)

[DEGREES CONFERRED](#)

[CAREER PROSPECTS](#)

COURSE FEATURES

1. What are the differences between the Life Sciences Major offered by NUS and Life Sciences programmes available elsewhere?

We can provide clarifications or details regarding our programme. In particular, we would like to emphasise our strengths:

- **Life Sciences is a multidisciplinary course** where multiple disciplines such as Biology, Chemistry, Computing and Statistics, play important roles. Our Life Sciences undergraduate curriculum is taught by departments in the Faculty of Science, as well as Yong Loo Lin School of Medicine, NUS.
- **Three specialisations within the NUS Life Sciences Major for students pursuing the Honours class to choose from:** Biomedical Science (BMS), Molecular and Cell Biology (MCB) and Environmental Biology (EVB).
- **Opportunities abound to experience and participate in Undergraduate Research Opportunities in Science (UROPS)**, both in the local context and in overseas programmes. Students pursuing the Honours class can choose to conduct a year-long research project that culminates in an Honours thesis. Our undergraduates thus get to experience the challenges and learning that come from pursuing an independent research project.
- **All students are in a four-year B.Sc. (Hons) degree programme at the time of admission.** There is an exit plan for students at the end of three years to graduate with a Bachelor of Science degree in Life Sciences. Our system is thus a “4-minus-1-year” concept.

2. What is the difference between Life Sciences and Biological Sciences in NUS? Is Life Sciences Major a programme under the Department of Biological Sciences?

Hosted by the Department of Biological Sciences, Faculty of Science, the NUS Life Sciences Major is jointly taught by **six departments** in the Faculty of Science and the Yong Loo Lin School of Medicine, NUS. Life Sciences Majors are students with the Department of Biological Sciences at the Faculty of Science.

The teaching departments for NUS Life Sciences are:

Faculty of Science

- Department of Biological Sciences

Medical Sciences Cluster, Yong Loo Lin School of Medicine

- Department of Anatomy
- Department of Biochemistry
- Department of Microbiology and Immunology
- Department of Pharmacology
- Department of Physiology

3. What are the differences between the Life Sciences Major and other biology-related majors?

The NUS Life Sciences Major incorporates all biomedical and biological disciplines. Within its curriculum, students upon completing the required Level 1000 foundation modules will choose elective modules according to their interests at Levels 2000 and 3000, and at Level 4000 to have one of the specialisations: Biomedical Science (BMS), Molecular and Cell Biology (MCB), Environmental Biology (EVB).

4. What are the differences between the three specialisations (BMS, MCB, EVB)?

Biomedical Science (BMS) is the study of the biomedical aspects in Life Sciences where it focuses on human health and diseases. In this area, students can choose to read modules in Pharmacology, Toxicology, Drug and Medicine Discovery, Human Physiology, Neurobiology, Immunology, Infection and Diseases.

Molecular and Cell Biology (MCB) emphasises the fundamental mechanisms of living organisms. Students can read modules on Protein Structure and Engineering, Biophysics and Structural Biology, Genomics and Epigenetics, Plant and Animal Developmental Biology, Oncogenes and Tumour Biology, and Stem Cell and Synthetic Biology.

Environmental Biology (EVB) affirms the importance of ecology and environmental conservation. Modules in this area cover Plant and Animal Physiology and Biodiversity, Evolution and Systematics, Aquatic and Terrestrial Ecology, and Environmental Processes and Conservation.

5. Can I take double specialisations within the Life Sciences Major if I am interested in more than one?

There is no double-specialisation scheme for Life Sciences Majors. However, students are welcome to read more than the required number of Life Sciences LSM electives for the Major requirements.

6. Are there any local/overseas research/internship/exchange opportunities available to students?

Internship is not an essential part of the Life Sciences Major curriculum. However, students keen to experience attachments with the industry and potential employers while at the same time earning credits may participate in UPIP (Undergraduate Professional Internship Programme). In the Honours year, internship may also be conducted in the form of projects in applied contexts of the industry as partial fulfilment for the Honours degree, earning credits under the module LSM4299. The Faculty of Science also offers a rich list of study abroad programmes for Science students to consider, both in coursework and research.

7. How many students choose to read the Life Sciences Major every year?

Every recent cohort year to date, there are about 300-350 students reading Life Sciences as their primary discipline.

8. How do I apply to read Life Sciences Major, and what are the admission criteria?

Applications to read an undergraduate course in NUS are to be made through the NUS Office of Admissions (OAM) website.

To qualify for entry into Life Sciences Major, candidates should apply for admission into the Faculty of Science (choosing 'Science' as the course of study at the point of admission application) which requires passes in two Science subjects at H2, GCE 'A' Level, or IB Higher Level, and fulfils the following criteria:

- Two good H2 passes (or equivalent) in Biology or Chemistry or Mathematics/Further Mathematics or Physics.
- Students without H2 pass in Biology or Chemistry may read the relevant bridging modules after joining the Life Sciences Major.

Candidates holding a local Polytechnic Diploma accredited for the Life Sciences Major (e.g. Biomedical Science or Biotechnology) may apply for admission to the NUS course Science (Life Sciences). These candidates receive admission specifically to Life Sciences Major because they may not be admissible to other majors in the Faculty of Science.

All other successful applicants will receive admission to the Faculty of Science first, before choosing to read Life Sciences Major.

9. I have been offered a place in Science in NUS. I would like to read Life Sciences Major. Is there additional selection round in order to read this major?

Admission to the Faculty of Science indicates that students are eligible to take up any of the majors within the Faculty, unless otherwise specified. These include the Life Sciences Major, and there is no further selection to go through.

10. Will I be able to read Life Sciences Major even if Biology is not taken at H2, GCE 'A' Level or IB Higher Level or equivalent?

Students may apply to the Faculty of Science upon meeting the Faculty's admissions criteria. Upon successful admission to the Science Faculty, students may then choose to read Life Sciences Major (no further selection). Candidates without Biology at H2, GCE 'A' Level or IB Higher Level or equivalent will need to read the relevant subject bridging module during the first semester and attain a good pass. Students without the requisite background will need to put in extra effort to understand the technical terms and concepts.

11. By taking the bridging module, will I be behind others in terms of the normal study plan?

No, a delay in the study plan is not likely to take place. During the first semester, when students are reading the bridging module, they may read other essential modules that their background qualification fulfils. In addition, they may read modules for General Education and Faculty Requirements in the first semester. After passing the bridging module, students will then complete the remaining Year 1 Major modules. The study plan will go on as per normal by the second year or fourth semester.

12. If I am holding a local Polytechnic Diploma that is not accepted for Science (Life Sciences), can I still gain entry into Life Sciences Major?

For Diploma holders, applicants can only choose from the list of degree courses the diploma is accredited for. If a Diploma holder successfully admits into NUS but not into Life Sciences Major, he/she may choose to read the subsidiary programmes like Life Sciences Second Major (subject to approval) or Life Sciences Minor.

[Back to top](#)

UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAMME IN SCIENCE (UROPS)

Life Sciences Major students will have the opportunity to participate in research by working on a research project in the laboratory supervised by our professors as a module read at Level 2000 or Level 3000: UROPS in Life Sciences modules LSM2288/9 and LSM3288/9. These can be used to fulfil the major and graduation requirements. All modular credits (MCs) earned from UROPS can be used to fulfil the Unrestricted Elective Modules. The four MCs earned from Level 3000 UROPS LSM3288 can satisfy one of the five Level 3000 LSM elective modules needed for major requirement.

[Back to top](#)

HONOURS CRITERIA AND REQUIREMENTS

Upon completing **at least 100 MCs** and the **Life Sciences Major requirements at B.Sc. level** with a **minimum CAP of 3.20**, students can continue to pursue the Honours class. Students complete the Honours year with a combination of research/internship projects and taught modules. The option is also available to pursue a specialisation or to graduate without one.

[Back to top](#)

DEGREES CONFERRED

3-Year Degree Programme – **B.Sc. in Life Sciences**

4-Year Honours Degree Programme – **B.Sc. (Hons) in Life Sciences**, with the option for specialisation in **Biomedical Science, Molecular and Cell Biology** or **Environmental Biology**

Note: Specialisation is conferred only to the B.Sc. (Hons) degree in Life Sciences. The B.Sc. degree will not be conferred with specialisation.

[Back to top](#)

CAREER PROSPECTS

NUS Life Sciences Major course is designed as a general science degree (as opposed to a professional degree). Career prospects are similar as that for most of the other majors offered by the Faculty of Science. Our graduates may consider embarking on graduate studies at NUS or overseas as well as entering graduate medical education such as the Duke-NUS Medical School.

NUS Life Sciences graduates are equipped to pursue a diverse range of careers ranging from research and scientific services, to healthcare and medical industries, and to education / research and related professions. Having a Science degree, coupled with the scientific thinking and analytical skills acquired during the undergraduate course, our graduates are eligible for a wide array of careers that seek B.Sc. degree as the entry qualification.

Life Sciences graduates are well suited for careers in biological, biomedical and biotechnological contexts, as well as agricultural, horticultural and environmental issues. Prospective employers include research institutes, government agencies (Ministries and Statutory Boards) such as National Parks Board (NParks), National Environment Agency (NEA), Health Sciences Authority (HSA) and Singapore Food Agency (SFA), specialist medical centres and clinics, and hospitals. Many of our graduates work as teachers in schools, Junior Colleges, Polytechnics and universities. Multinational corporations (MNCs) and local companies from the private and industrial sectors involving biotechnology, medical, pharmaceuticals, food production and environmental technology are also common options considered by our graduates.

In addition, Life Sciences graduates have also embarked on a wide spectrum of non-life sciences related professions such as mass media productions, communications and information services, banking and finance, law and public services, defense and security. The more entrepreneurial graduates have also set up their own business ventures.

[Back to top](#)