LIFE SCIENCES PROGRAMME OFFERS EXCELLENT RESEARCH TRAINING AND INTERNSHIP OPPORTUNITIES.

NUS National University of Singapore

DEPARTMENT OF BIOLOGICAL SCIENCES

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LIFE SCIENCES ENQUIRY

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lifesciences.nus.edu.sg

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Prospects

NUS Life Sciences Major graduates are fully poised to pursue a diverse range of careers ranging from research and scientific services, to healthcare and medical industries, and to education and related professions. Embarking on graduate studies at NUS or overseas as well as graduate medical education are also exciting options for our graduates. Prospective employers include research and education institutes, public agencies such as National Parks Board (NParks), National Environment Agency (NEA), Health Sciences Authority (HSA) and Singapore Food Agency (SFA), specialist medical centres and clinics, government and private hospitals, and industrial sectors involving biotechnology, pharmaceutical, food production and environmental technology.

To Read Life Sciences Major

Apply for Science as the course of study at NUS, which requires passes in two Science subjects (Biology, Chemistry, Physics, either Mathematics or Further Mathematics) at H2 or GCE 'A' Level (or equivalents).

Select Life Sciences in the first semester which needs H2 Level or GCE 'A' Level passes (or equivalents) in Biology and Chemistry. Read and pass the relevant bridging module in the first semester, if without.

Life Sciences may also be applied directly in upfront offer of Double-Degree, Double-Major and Major-Minor Programmes with this Major.

Minor and Second Major in Life Sciences are available for undergraduate students of other primary disciplines.

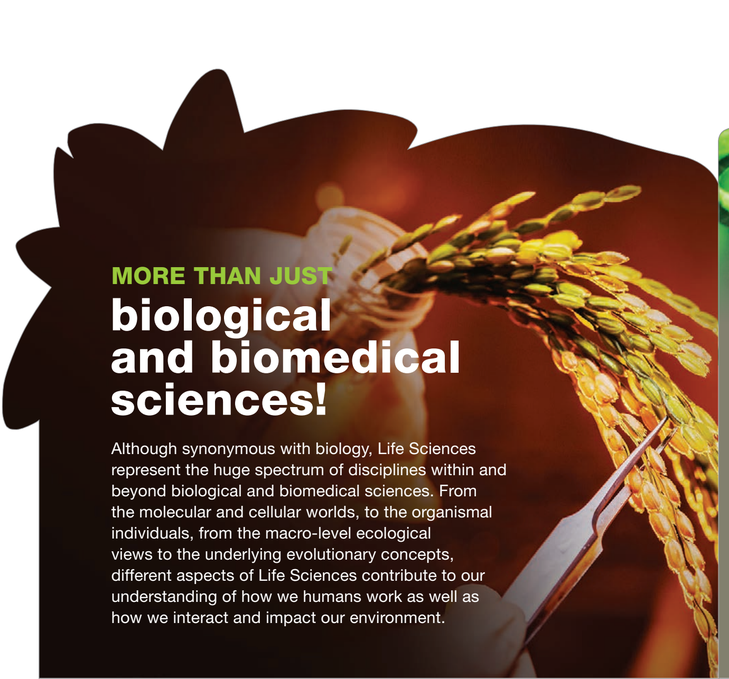
Programme Structure in Brief

DEGREE COMPONENTS	MODULES	MODULAR CREDITS
General Education	• **5** Pillars of General Education (one module each).	20
Computational Thinking	• CS1010 (or variant) Programming Methodology or • COS2000 Computational Thinking for Scientists	4
Science Communication	• SP1541 Exploring Science Communication through Popular Science	4
Major Level 1000	• LSM1102 Molecular Genetics • LSM1105 Evolutionary Biology • LSM1106 Molecular Cell Biology • CM1401 Chemistry for Life Sciences • ST1232 Statistics for Life Sciences	20
Major Level 2000	• LSM2191 Laboratory Techniques in Life Sciences • **3** LSM22xx elective modules (except LSM2288 and LSM2289)	16
Major Level 3000	• **4** LSM32xx elective modules (except LSM3289)	16
Major Level 4000	• **Honours Research Project Option** Pass LSM4199 Honours Project in Life Sciences, and **4** LSM42xx elective modules. or • **Applied Internship Project Option** Pass LSM4299 Applied Project in Life Sciences, and **4** LSM42xx elective modules.	32
Unrestricted Electives	• **12** modules typically. Can be used to fulfil the requirements of Minor or Second Major.	48

DEPARTMENT OF
BIOLOGICAL SCIENCES

DiscLIFE SCIENCESveries

Predicting the Future by Understanding the Past



MORE THAN JUST

biological and biomedical sciences!

Although synonymous with biology, Life Sciences represent the huge spectrum of disciplines within and beyond biological and biomedical sciences. From the molecular and cellular worlds, to the organismal individuals, from the macro-level ecological views to the underlying evolutionary concepts, different aspects of Life Sciences contribute to our understanding of how we humans work as well as how we interact and impact our environment.

ONE MAJOR, THREE SPECIALISATIONS, DIVERSE DISCIPLINES!

The **BSc (Hons) degree in Life Sciences** is the undergraduate course on biological and biomedical sciences. The Major emphasises the underlying knowledge vital to all areas of Life Sciences in the first year of study, and allows selection of relevant advanced-level modules to focus on one of the three specialisations and other exciting themes in Life Sciences.

Specialisations

Biomedical Science focuses on human health and diseases, and its goal of clinical solutions.

Molecular and Cell Biology emphasises the fundamental physical, chemical and biological mechanisms of living organisms.

Environmental Biology affirms the importance and relevance of biodiversity and ecology and its applications towards environmental conservation.

Diverse Disciplines – Roadmaps and Modules

Pick from the diverse roadmaps of modules we have developed, or freely structure one that is uniquely yours.

Pharmacology
- Fundamental Pharmacology
- Toxicology
- Cancer Pharmacology
- Drug Discovery and Clinical Trials

Cell and Development
- Cell Biology
- Developmental Biology
- Stem Cell Biology
- Tumour Biology

Plant Science
- Fundamentals of Plant Biology
- Tropical Horticulture
- Comparative Botany
- Plant Growth and Development

Human Physiology
- Metabolism and Regulation
- Human Physiology: Cardiopulmonary System
- Human Physiology – Hormones and Health
- Functional Ageing

Neurobiology
- Neuronal Signalling and Memory Mechanisms
- Neuronal Development and Diseases
- Human Neuroanatomy
- Systems Neurobiology

Aquatic Biology and Ecology
- Aquatic Invertebrate Diversity
- Plankton Ecology
- Aquatic Vertebrate Diversity
- Marine Biology
- Freshwater Biology

Infectious Diseases
- Immunology
- Translational Microbiology
- Advances in Antimicrobial Strategies
- Infection and Immunity

Physical Biology
- Molecular Biophysics
- Structural Biology
- Mechanobiology
- Protein Engineering

Conservation
- Biodiversity
- Global Change Biology
- Tropical Conservation Biology
- Urban Ecology

Exciting Enhancements for Life Sciences Major!

Expanding from the Major, a Life Sciences student can enhance the academic developments and experience through a variety of cross- and inter-disciplinary undergraduate courses at NUS as well as at overseas partner universities.

Double Major for Life Sciences with Second Major in:
- Chemistry
- Management
- Psychology
- Data Analytics

Major-Minor for Life Sciences with Minor in:
- Aquatic Ecology
- Forensic Science
- Public Health
- Computer Science

Joint Degree with University of Dundee in areas of:
- Drug Design and Discovery
- Developmental Biology
- Plant Science