

LIFE SCIENCES UNDERGRADUATE PROGRAMME: MAJOR IN LIFE SCIENCES

Schedule for Completion of BSc (Hons) in Life Sciences – Matriculation Cohort AY2017/2018

Typical Study Plan for reading Life Sciences as Primary Major. Numbers in [] indicates Modular Credits (MCs).

	Semester	Life Sciences Major Requirements	Other Graduation Requirements
YEAR 1	1 st Semester (Sem 1) & 2 nd Semester (Sem 2)	LSM1102 Molecular Genetics [4] LSM1106 Molecular Cell Biology [4] LSM1105 Evolutionary Biology [4] CM1401 Chemistry for Life Sciences [4] ST1232 Statistics for Life Sciences [4]	General Education: GER1000 – Quantitative Reasoning [4] GEQ1000 – Asking Questions [4] GEH1XXX – Human Culture [4] GES1XXX – Singapore Studies [4] GET1XXX – Thinking and Expression [4] Faculty Requirements: SP1541 Exploring Science Communication through Popular Science [4] <u>1</u> Computing Module [4]
	3 rd Semester (Sem 1) & 4 th Semester (Sem 2)	LSM2191 Laboratory Techniques in Life Sciences [4] Pass 3 LSM22xx (except LSM2288/9) [3x4=12]	Unrestricted Elective Modules (UEMs) – 48 MCs or typically 12 modules Use the UEMs to complete another Major/Minor programme! Potential pairing with: • Second Major [Typically 12 modules]: - Chemistry - Physics - Statistics - Economics - Geography - Psychology (direct admission available) - Sociology - Management (direct admission available)
YEAR 3	5 th Semester (Sem 1) & 6 th Semester (Sem 2)	Pass 4 LSM32xx (except LSM3289), one of which may be a LSM-recognised elective module [4x4=16]	
YEAR 4		Pass the Honours Year 32 MCs via one of the following options: Honours Research Project Pass LSM4199 Honours Project in Life Sciences, AND pass another 4 LSM42xx elective modules. Applied Internship Project Pass LSM4299 Applied Project in Life Sciences, AND pass another 4 LSM42xx elective modules. Coursework Taught Modules Pass 8 LSM42xx elective modules.	
	7 th Semester (Sem 1) & 8 th Semester (Sem 2)	Choose to complete a specialisation (or none): - Biomedical Sciences - Molecular and Cell Biology - Environmental Biology	• Minor [Typically 6 modules]: - Aquatic Ecology - Analytical Chemistry - Biophysics - Forensic Science - Geosciences - Management - Medical Physics - Pharmaceutical Sciences - Psychology - Public Health (direct admission available) Typical workload for one semester is 20 MCs (5 modules). Students are advised to read modules on top of the Major modules to fulfill other graduation requirements.

	BSc – 3 Years	BSc (Hons) – 4 Years
General Education	20 MCs	20 MCs
Faculty Requirements	8 MCs	8 MCs
Major Requirements	52 MCs	84 MCs
Unrestricted Elective Modules	40 MCs	48 MCs
Total	120 MCs	160 MCs

To qualify for Honours year, students must fulfill the Life Sciences Major Requirements at BSc standard (i.e. Levels 1000, 2000 and 3000 Major Requirements), and obtained a minimum overall CAP of 3.20 on completion of 100 MCs or more.

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List of Life Sciences Major (LSM) Modules

<p><u>Level 1000/2000 LSM Essentials</u> Molecular Genetics Molecular Cell Biology Evolutionary Biology Chemistry for Life Sciences Statistics for Life Sciences Laboratory Techniques in Life Sciences</p>	<p><u>Level 22xx LSM Electives</u> Metabolism and Regulation Human Anatomy General Physiology Genes and Genomes Cell Biology Physical Concepts in Biology Introductory Bioinformatics Ecology and Environment Biodiversity Applied Data Analysis in Ecology and Evolution Fundamental Techniques in Microbiology</p>
<p><u>Level 32xx LSM Electives</u> Research and Communication in Life Sciences Fundamental Pharmacology Human Physiology: Cardiopulmonary System Human Physiology – Hormones and Health Neuronal Signaling and Memory Mechanisms Neuronal Development and Diseases Human Ageing Cardiopulmonary Pharmacology Neuropharmacology Human Neuroanatomy Immunology Molecular Basis of Human Diseases Molecular Microbiology in Human Diseases Protein Structure and Function Microbiology Developmental Biology Biological Imaging of Growth and Form Genomic Data Analysis Translational Microbiology Molecular Biophysics RNA Biology and Technology Synthetic Biology Practical Synthetic Biology Evolution and Comparative Genomics Ecology of Aquatic Environments Ecology of Terrestrial Environments Tropical Horticulture Comparative Botany Fungal Biology Environmental Animal Physiology Field Studies in Neotropical Ecosystems Environmental Biochemistry Entomology Avian Biology and Evolution Behavioural Biology Global Change Biology</p>	<p><u>Level 42xx Biomedical Science LSM Electives</u> Toxicology System Neurobiology Cancer Pharmacology Extreme Physiology Functional Ageing Drug Discovery and Clinical Trials Advanced Immunology Advances in Antimicrobial Strategies Genetic Medicine in the Post-Genomic Era Infection and Immunity Stem Cell Biology Experimental Models for Human Disease and Therapy Therapeutic and diagnostic agents from animal toxins</p> <p><u>Level 42xx Molecular & Cell Biology LSM Electives</u> Structural Biology Advanced Cell Biology Mechanobiology Nuclear Mechanics and Genome Regulation Functional Genomics Protein Engineering Tumour Biology Oncogenes and Signal Transduction Epigenetics and Chromatin Biology Plant Growth and Development Animal Reproduction</p> <p><u>Level 42xx Environmental Biology LSM Electives</u> Principles of Taxonomy and Systematics Methods in Mathematical Biology Evolution of Development Marine Biology Tropical Conservation Biology Field Studies in Biodiversity Freshwater Biology Urban Ecology Aquatic Biodiversity Animal Communications & Sensory Ecology</p>



For more information, please visit our website –

<http://lifesciences.nus.edu.sg/admissions.html>
