

NUS LIFE SCIENCES UNDERGRADUATE PROGRAMME SECOND MAJOR IN LIFE SCIENCES

1. Programme Requirements

To be awarded a Second Major in Life Sciences, the following requirements are to be fulfilled.

MODULE LEVEL	SECOND MAJOR IN LIFE SCIENCES REQUIREMENTS (FOR MATRICULATION COHORTS AY16/17 ONWARDS)	CUMULATIVE MAJOR MC
Level 1000 (16 MC)	Pass <ul style="list-style-type: none"> - LSM1102 Molecular Genetics - LSM1105 Evolutionary Biology - LSM1106 Molecular Cell Biology - CM1401 Chemistry for Life Sciences* OR ST1232 Statistics for Life Sciences * If a precluding module to CM1401 (i.e. CM1121 or CM1402 or CM1501) is passed, the precluding module is accepted to be fulfilling the Second Major in Life Sciences in lieu of CM1401.	16
Level 2000 (16 MC)	Pass <ul style="list-style-type: none"> - LSM2191 Laboratory Techniques in Life Sciences - Three LSM22xx modules (except LSM2288 and LSM2289) 	32
Level 3000 (16 MC)	Pass Four LSM32xx modules (except LSM3289), of which up to two (up to 8 MC) may be LSM42xx (except LSM4299) and/or LSM-recognised elective modules.	48

MODULE LEVEL	SECOND MAJOR IN LIFE SCIENCES REQUIREMENTS (FOR MATRICULATION COHORT AY15/16)	CUMULATIVE MAJOR MC
Level 1000 (16 MC)	Pass <ul style="list-style-type: none"> - LSM1101 Biochemistry of Biomolecules - LSM1102 Molecular Genetics - LSM1103 Biodiversity - LSM1104 General Physiology 	16
Level 2000 (16 MC)	Pass <ul style="list-style-type: none"> - LSM2101 Metabolism and Regulation - LSM2102 Molecular Biology - LSM2103 Cell Biology - LSM2191 Laboratory Techniques in Life Sciences 	32
Level 3000 (16 MC)	Pass Four LSM32xx modules (except LSM3289), of which up to two (up to 8 MC) may be LSM42xx (except LSM4299) and/or LSM-recognised elective modules.	48

2. Application

The application procedure differs between Faculty of Science undergraduate students and Non-Science students (undergraduates from faculties/schools beyond Faculty of Science). Please refer to the following link for the details for application.

<http://www.science.nus.edu.sg/undergraduate-studies/ugprog/second-majors>

Science Students

No prior approval is required. Students may declare Second Major in Life Sciences via the Centralised Online Registration System (CORS) at the start of every semester before the sixth semester of study. During every CORS Exercise, please visit the Life Sciences Undergraduate Programme website for the procedure to register for LSM modules.

<http://www.lifesciences.nus.edu.sg/>

Non-Science Students

Application is required to read the Second Major in Life Sciences and is subject to the approval of the Department of Biological Sciences. It is to be applied before the end of the fifth semester of study. During every CORS Exercise, please visit the Life Sciences Undergraduate Programme website for the procedure to register for LSM modules.

<http://www.lifesciences.nus.edu.sg/>

The application form for the Second Major is available at the following:

<http://www.science.nus.edu.sg/undergraduate-studies/ugprog/second-majors>

When applying, please submit the following:

- The application form
- A short write-up of the reasons for applying for this Second Major

Please submit the application documents to Department of Biological Sciences Administration Office, Block S3 Level 5 (Attn: Mr Lim Miah Kyan). Late submissions or incomplete application forms will not be considered. Applicants will be notified the result via email by December 2018. **The deadline to apply is [2 November 2018 \(Friday\)](#).**

The next application window will be in March-April 2019.

3. Enquiry

Further enquiries on Second Major in Life Sciences, you may contact Life Sciences Enquiry (dbsbox2@nus.edu.sg).

List of Life Sciences Major (LSM) Modules

All LSM modules are 4MC each except otherwise if indicated.

LSM2211 LSM2212 LSM2231 LSM2232 LSM2233 LSM2234 LSM2241 LSM2251 LSM2252 LSM2253 LSM2291	<u>LSM22xx Elective Modules</u> Metabolism and Regulation Human Anatomy General Physiology Genes, Genomes and Biomedical Implications Cell Biology Physical Concepts in Biology Introductory Bioinformatics Ecology and Environment Biodiversity Applied Data Analysis in Ecology and Evolution Fundamental Techniques in Microbiology	LSM4199 LSM4210 LSM4211 LSM4213 LSM4214 LSM4215 LSM4217 LSM4221 LSM4222 LSM4223 LSM4225 LSM4226 LSM4227 LSM4228 LSM4229	<u>LSM4xxx Elective Modules (Biomedical Science)</u> Honours Project in Life Sciences (16MC) Topics in Biomedical Science Toxicology Systems 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
LSM3201 LSM3211 LSM3212 LSM3214 LSM3215 LSM3216 LSM3217 LSM3218 LSM3219 LSM3222 LSM3223 LSM3224 LSM3225 LSM3226 LSM3231 LSM3232 LSM3233 LSM3234 LSM3235 LSM3241 LSM3242 LSM3243 LSM3245 LSM3246 LSM3247 LSM3252 LSM3254 LSM3255 LSM3256 LSM3258 LSM3259 LSM3262 LSM3264 LSM3265 LSM3266 LSM3267 LSM3272 LSM3273 LSM3288	<u>LSM32xx Elective Modules</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 Medical Mycology and Drug Discovery Protein Structure and Function Microbiology Developmental Biology Biological Imaging of Growth and Form Epigenetics in Human Health and Diseases 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 Environmental Biochemistry Entomology Avian Biology and Evolution Behavioural Biology Global Change Biology Ecology, Conservation and Management of Sri Lankan Ecosystems Advanced UROPS in Life Sciences I	LSM4199 LSM4231 LSM4232 LSM4234 LSM4235 LSM4241 LSM4242 LSM4243 LSM4244 LSM4245 LSM4251 LSM4252	<u>LSM4xxx Elective Modules (Molecular and Cell Biology)</u> Honours Project in Life Sciences (16MC) Structural Biology Advanced Cell Biology Mechanobiology Nuclear Mechanics and Genome Regulation Functional Genomics Protein Engineering Tumour Biology Oncogenes and Signal Transduction Advanced Epigenetics and Chromatin Biology Plant Growth and Development Animal Reproduction
		LSM4199 LSM4254 LSM4255 LSM4256 LSM4257 LSM4261 LSM4262 LSM4263 LSM4264 LSM4265 LSM4267	<u>LSM4xxx Elective Modules (Environmental Biology)</u> Honours Project in Life Sciences (16MC) Principles of Taxonomy and Systematics Methods in Mathematical Biology Evolution of Development Aquatic Vertebrate Diversity Marine Biology Tropical Conservation Biology Field Studies in Biodiversity Freshwater Biology Urban Ecology Animal Communications & Sensory Ecology
		LSM4299	<u>LSM4xxx Elective Modules (Not for any specialisation)</u> Applied Project in Life Sciences (16MC)

List of LSM-Recognised Elective Modules

LSM3991	<u>Other LSM-Prefixed Modules</u> Exchange Enrichment Module	PL3232 PL3233	<u>Faculty of Arts and Social Sciences</u> Biological Psychology Cognitive Psychology
CM3221 CM3222 CM3225 CM3251 CM3261 CM4227 PR3116 PR4205 ZB4171	<u>Faculty of Science</u> Organic Synthesis: The Disconnection Approach Organic Reaction Mechanisms Biomolecules Nanochemistry Environmental Chemistry Chemical Biology Concepts in Pharmacokinetics and Biopharmaceutics Bioorganic Principles of Medicinal Chemistry Advanced Topics in Bioinformatics	CN4247R CN4249 CN5172 SPH3101 SPH3102 SPH3104 SPH3201	<u>Faculty of Engineering</u> Enzyme Technology Engineering Design in Molecular Biotechnology Biochemical Engineering <u>Saw Swee Hock School of Public Health</u> Biostatistics for Public Health Public Health Communication Infectious disease epidemiology and public health Public Health Practice