

Graduation Requirements for Cohort AY20/21

Environmental Biology and Geography

Summary of Requirements	Units
UNIVERSITY LEVEL REQUIREMENTS	20
General Education	5 Pillars: <ul style="list-style-type: none">• Asking Questions (GEQ1000)• Quantitative Reasoning (GER1000)• Thinking and Expression (GET1050)• Singapore Studies (GES)• Human Cultures (GEH)
UNRESTRICTED ELECTIVES	35 – 36
PROGRAMME REQUIREMENTS	104 – 105
TOTAL	160

Students admitted from AY2017/18 onwards and who are enrolled in USP or UTCP programmes are required to read a course from the **Quantitative Reasoning (GER1000) and Thinking and Expression pillar (GET1050)** in partial fulfilment of the University Level Requirements for General Education. These students are not required to read the General Education Courses from the remaining pillars as they will fulfil their remaining University Level Requirements as part of their USP or UTCP respectively.

Students in the Residential College 4 (RC4) programme only have to read a course from the **Quantitative Reasoning (GER1000) pillar** in partial fulfilment of the University Level Requirements for General Education. They will fulfil their remaining University Level Requirements as part of their RC4 programme.

Course offerings varies every academic year. Students are advised to check the latest list of courses offered from NUSMods. A list of BES electives that will be offered in the subsequent academic year will be emailed to you by July of each year.

**Programme Requirements for Bachelor of Environmental Studies
(For Cohorts AY20/21)
Environmental Biology Specialisation**

Level	Programme Requirements	Cumulative Units
1000	CM1402 General Chemistry EC1301 Principles of Economics or EC1101E Introduction to Economic Analysis ENV1101 Environmental Studies: An Interdisciplinary Overview ENV1202 Communications for Environmental Studies GE1101E Geographical Journeys: Exploring World Environments ST1232 Statistics for Life Sciences	24
2000	ENV2102 Environmental Law ENV2103 The Environment and Public Health ENV2301 Methods and Techniques for Environmental Studies LSM2252 Biodiversity LSM2253/LSM3257 Applied Data Analysis in Ecology and Evolution EC2383 Environmental Economics <u>Choose 3 courses from the following list:</u> ESE2000 Chemistry for an Environmentally Sustainable Future ESE2401 Water Science & Technology GE2101 Methods and Practices in Geography GE2102 Politics, Economies And Space GE2103 Our Planet: an Earth Systems Science Perspective GE2215 Introduction to GIS and Remote Sensing Methods GE2218 Leisure, Recreation and Tourism GE2220 Terrestrial and Coastal Environment (defunct from AY21/22) GE2221 Nature and Society (defunct from AY21/22) GE2222 Politics and Space GE2228 Weather and Climate (defunct from AY21/22) GE2229 Water and the Environment (defunct from AY21/22) GE2230 Energy Futures: Environment and Sustainability (defunct from AY21/22) GE2231 Introduction to Social and Cultural Geographies HY2235 Environmental History LAD2004 Planting Design and Horticulture LSM2251 Ecology & Environment PH2216^ Environmental Philosophy PH2226^ Concept of Nature in Inquiry RE2701 Urban Planning SC2207 Peoples & Cultures of Southeast Asia SC2221 Humans and Natures <i>^Students have the choice to read both PH 2216 and PH 2226. However, only 4 Unit can satisfy the programme requirements. The other 4 Unit will count towards Unrestricted Elective.</i>	60
3000	ENV3102 Field Course in Environmental Studies <u>Choose any 3 of the following courses with not more than 1 course from List A and at least one of the courses being ENV3101 or ENV3104:</u> ENV3101 Environmental Challenges in Asia ENV3104 Socio-Ecological Assessment of Environmental Impacts LSM3252 Evolution and Comparative Genomics LSM3254 Ecology of Aquatic Environments LSM3255 Ecology of Terrestrial Environments LSM3256 Tropical Horticulture LSM3258 Comparative Botany LSM3259 Fungal Biology	76

	<p>LSM3262 Environmental Animal Physiology LSM3263 Field Studies in Neotropical Ecosystems LSM3265 Entomology LSM3266 Avian Biology and Evolution LSM3267 Behavioural Biology LSM3272 Global Change Biology LSM3273 Ecology, Conservation and Management of Sri Lankan Ecosystems LSM3288 Advanced UROPS in Life Sciences I <u>or</u> ENV3288 Advanced UROP in Environmental Studies I <u>or</u> ENV3202A Environmental Studies Internship Programme (4 Unit) * List A courses#</p> <p>* Students have the choice to read LSM3288, ENV3288 and ENV3202A. However, only 4 Unit can satisfy the programme requirements. The other 4 to 8 Units will count towards Unrestricted Electives.</p>	
4000	<p>LSM4199 Honours Project (16 Unit) / LSM4299 Applied Project (16 Unit) ENV4101 Environmental Management in Singapore</p> <p><u>Choose any 2 of the following courses with not more than 1 course from List B:</u> LSM4251 Plant Growth and Development LSM4254 Principles of Taxonomy and Systematics LSM4255 Methods in Mathematical Biology LSM4256 Evolution of Development LSM4257 Aquatic Vertebrate Diversity LSM4259 Evolutionary Genetics of Reproduction LSM4260 Plankton Ecology LSM4261 Marine Biology LSM4262 Tropical Conservation Biology LSM4263 Field Studies in Biodiversity LSM4264 Freshwater Biology LSM4265 Urban Ecology LSM4266 Aquatic Invertebrate Diversity LSM4267 Light & Vision in Animal Communication LSM4268 Environmental Bioacoustics LSM4351 Vegetation and Plant Diversity of Southeast Asia List B courses#</p>	104 - 105

Students who choose to read courses in Lists A and B must ensure that they have the necessary prerequisites.

List A:

GE3210 Natural Resources: Policy and Practice
 GE3216 Applications of GIS and Remote Sensing
 GE3226 Tourism and Development
 GE3227 Urban Climates (defunct from AY21/22)
 GE3231 Natural Hazards
 GE3238: GIS Design and Practices
 GE3246 Environmental Pollution (defunct from AY21/22)
 GE3250 Nature and Society
 GE3251 Southeast Asia
 GE3253 Weather and Climate
 GE3254 Energy Futures: Environment and Sustainability
 GE3255 Aquatic, Riparian and Coastal Systems
 GE3256 Earth Surface Processes, Landforms and Ecosystems
 GE3259 Applied Geographical Data Science
 XD3103 Planet Earth
 AR2723 Strategies for Sustainable Architecture
 DSC3201/DOS3701 Supply Chain Management
 DOS3714 Sustainable Operations Management
 ESE3101 Solid and Hazardous Waste Management
 ESE3201 Air Quality Management
 ESE3301 Environmental Microbiological Principles
 ESE3401 Waste and Wastewater Engineering 1

List B:

GE4207HM Coastal Management (5 Unit)
 GE4211HM Advanced Hydrology and Water Resources Management (5 Unit)
 GE4212HM Environmental Modelling (5 Unit)
 GE4214HM Remote Sensing of Environment (5 Unit)
 GE4218HM Interpreting Tourism Space and Cultures (5 Unit)
 GE4219HM Development and Environment in Southeast Asia (5 Unit)
 GE4220HM Field Investigation in Physical Geography (5 Unit)
 GE4221HM Field Investigation in Human Geography (5 Unit)
 GE4222HM Advanced Geomorphology (5 Unit)
 GE4223HM Development of Geographical Thought (5 Unit)
 GE4224HM Applied Biogeography (5 Unit)
 GE4227HM Climate Change: Processes, Impact and Responses (5 Unit)
 GE4229 Earth Systems Science (5 Unit) (defunct from AY21/22)
 GE4232HM Global and Political Ecologies (5 Unit)
 GE4233HM Geography in the Contemporary World (5 Unit)
 GE4234HM Environmental Change in the Tropics (5 Unit)
 GE4235HM Urban Climate (5 Unit)
 GE4237HM Environmental Pollution (5 Unit)
 GE4239HM Coastal Dynamics (5 Unit)
 GE4240HM Spatial Decision-Making (5 Unit)
 GE4241HM Spatial Health (5 Unit)

LAD3006 Basics of Ecology
PF3504 Energy Management
PS3274 Environmental Politics
RE3901 Advanced Urban Planning
SC3212 Southeast Asia in a Globalizing World

CE4231 Earth's Climate: Science & Modelling ESE4301
Wastewater Biotechnology
ESE4401 Water & Wastewater Engineering 2
ESE4402 Treatment Plant Hydraulics

Students can take one Level 2000/3000 YID-coded or YSS3229 Urbanisation and the Environment from Yale-NUS Environmental Studies to count towards your major requirements. Any additional Yale-NUS courses read will be counted towards unrestricted elective

**Programme Requirements for Bachelor of Environmental Studies
(For Cohorts AY20/21)
Environmental Geography Specialisation**

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3000	ENV3102 Field Course in Environmental Studies <u>Choose any 3 of the following courses with not more than 1 course from List C and at least one of the courses being ENV3101 or ENV3104:</u> ENV3101 Environmental Challenges in Asia ENV3104 Socio-Ecological Assessment of Environmental Impacts GE3210 Natural Resources: Policy and Practice GE3216 Applications of GIS and Remote Sensing GE3226 Tourism and Development GE3227 Urban Climates (defunct from AY21/22) GE3230A Field Studies in Geography: Southeast Asia (8 Unit)+ GE3231 Natural Hazards GE3238 GIS Design and Practices GE3240 Geographical Research: Developing Ideas	76

	<p>GE3246 Environmental Pollution (defunct from AY21/22) GE3250 Nature and Society GE3251 Southeast Asia GE3253 Weather and Climate GE3254 Energy Futures: Environment and Sustainability GE3255 Aquatic, Riparian and Coastal Systems GE3256 Earth Surface Processes, Landforms and Ecosystems GE3259 Applied Geographical Data Science XD3103 Planet Earth GE3551 FASS UROP <u>or</u> ENV3288 Advanced UROP in Environmental Studies I <u>or</u> ENV3202A Environmental Studies Internship Programme (4 Unit) * List C courses#</p> <p>*If students read GE3230A, they will be deemed to have fulfilled the 8 Units required. * Students have the choice to read GE3551, ENV3288 and ENV3202A. However, only 4 Unit can satisfy the programme requirement. The other 4 to 8 Units will count towards Unrestricted Electives.</p>	
4000	<p>GE4401 Honours Thesis (15 Unit) OR Coursework option: Read an additional 3 Level 4000 GE-coded courses from elective list below (15 Unit) ENV4101 Environmental Management in Singapore</p> <p><u>Choose any 2 of the following courses with not more than 1 course from List D:</u> GE4207HM Coastal Management (5 Unit) GE4211HM Advanced Hydrology and Water Resources Management (5 Unit) GE4212HM Environmental Modelling (5 Unit) GE4214HM Remote Sensing of Environment (5 Unit) GE4218HM Interpreting Tourism Space and Cultures (5 Unit) GE4219HM Development and Environment in Southeast Asia (5 Unit) GE4220HM Field Investigation in Physical Geography (5 Unit) GE4221HM Field Investigation in Human Geography (5 Unit) GE4222HM Advanced Geomorphology (5 Unit) GE4223HM Development of Geographical Thought (5 Unit) GE4224HM Applied Biogeography (5 Unit) GE4227HM Climate Change: Processes, Impact and Responses (5 Unit) GE4229 Earth Systems Science (5 Unit) (defunct from AY21/22) GE4232HM Global and Political Ecologies (5 Unit) GE4233HM Geography in the Contemporary World (5 Unit) GE4234HM Environmental Change in the Tropics (5 Unit) GE4235HM Urban Climate (5 Unit) GE4237HM Environmental Pollution (5 Unit) GE4239HM Coastal Dynamics (5 Unit) GE4240HM Spatial Decision-Making (5 Unit) GE4241HM Spatial Health (5 Unit) List D courses#</p>	104 - 105

Students who choose to read courses in Lists C and D must ensure that they have the necessary prerequisites.

List C:

LSM3252 Evolution and Comparative Genomics
LSM3254 Ecology of Aquatic Environments
LSM3255 Ecology of Terrestrial Environments
LSM3256 Tropical Horticulture
LSM3258 Comparative Botany
LSM3259 Fungal Biology
LSM3262 Environmental Animal Physiology
LSM3263 Field Studies in Neotropical Ecosystems
LSM3265 Entomology
LSM3266 Avian Biology and Evolution
LSM3267 Behavioural Biology
LSM3272 Global Change Biology
LSM3273 Ecology, Conservation and Management of Sri Lankan Ecosystems

List D:

LSM4251 Plant Growth and Development
LSM4254 Principles of Taxonomy and Systematics
LSM4255 Methods in Mathematical Biology
LSM4256 Evolution of Development
LSM4257 Aquatic Vertebrate Diversity
LSM4259 Evolutionary Genetics of Reproduction
LSM4260 Plankton Ecology
LSM4261 Marine Biology
LSM4262 Tropical Conservation Biology
LSM4263 Field Studies in Biodiversity
LSM4264 Freshwater Biology
LSM4265 Urban Ecology
LSM4266 Aquatic Invertebrate Diversity
LSM4267 Light & Vision in Animal Communication

AR2723 Strategies for Sustainable Architecture
DSC3201/DOS3701 Supply Chain Management
DOS3714 Sustainable Operations Management
LAD3006 Basics of Ecology
ESE3101 Solid and Hazardous Waste Management
ESE3201 Air Quality Management
ESE3301 Environmental Microbiological Principles
ESE3401 Waste and Wastewater Engineering 1
PF3504 Energy Management
PS3274 Environmental Politics
RE3901 Advanced Urban Planning
SC3212 Southeast Asia in a Globalizing World

LSM4268 Environmental Bioacoustics
LSM4351 Vegetation and Plant Diversity of Southeast Asia
CE4231 Earth's Climate: Science and Modelling
ESE4301 Wastewater Biotechnology
ESE4401 Water & Wastewater Engineering 2
ESE4402 Treatment Plant Hydraulics

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