Graduation Requirements for AY18/19

Environmental Biology and Geography

<table>
<thead>
<tr>
<th>Summary of Requirements</th>
<th>MCs</th>
</tr>
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<tbody>
<tr>
<td>UNIVERSITY LEVEL REQUIREMENTS</td>
<td>20</td>
</tr>
<tr>
<td>General Education</td>
<td>5 Pillars:</td>
</tr>
<tr>
<td></td>
<td>• Asking Questions (GEQ1000)</td>
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<tr>
<td></td>
<td>• Quantitative Reasoning (GER1000)</td>
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<tr>
<td></td>
<td>• Thinking and Expression (GET1031A / GET1050)</td>
</tr>
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<td></td>
<td>• Singapore Studies (GES)</td>
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<td></td>
<td>• Human Cultures (GEH)</td>
</tr>
<tr>
<td>UNRESTRICTED ELECTIVES</td>
<td>35 – 36</td>
</tr>
<tr>
<td>PROGRAMME REQUIREMENTS</td>
<td>104 – 105</td>
</tr>
<tr>
<td>TOTAL</td>
<td>160</td>
</tr>
</tbody>
</table>

Students admitted from AY2017/18 onwards and who are enrolled in USP or UTCP programmes are required to read a module from the Quantitative Reasoning (GER1000) and Thinking and Expression pillar (GET1031A/GET1050) in partial fulfilment of the University Level Requirements for General Education. These students are not required to read the General Education Modules 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 module 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.

Module offerings varies every academic year. Students are advised to check the latest list of modules 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.

Last update 16/9/19
### Programme Requirements for Bachelor of Environmental Studies
(For Cohort AY18/19)
Environmental Biology Specialisation

<table>
<thead>
<tr>
<th>Level</th>
<th>Programme Requirements</th>
<th>Cumulative MCs</th>
</tr>
</thead>
</table>
| 1000   | CM1402 General Chemistry  
         EC1301 Principles of Economics  
         ENV1101 Environmental Studies: An Interdisciplinary Overview  
         GE1101E Geographical Journeys: Exploring World Environments  
         MA1312 Calculus with Applications  
         ST1232 Statistics to Life Sciences  
         ENV1202 Communications for Environmental Studies | 28 |
| 2000   | ENV2101 Global Environmental Change  
         ENV2102 Environmental Law  
         ENV2103 The Environment and Public Health  
         LSM2252 Biodiversity  
         **EC2383 Environmental Economics (new)** | 56 |
|        | Choose 3 modules from the following list:  
        | ESE2401 Water Science & Technology  
        | GE2101 Methods and Practices in Geography  
        | GE2215 Introduction to GIS and Remote Sensing Methods  
        | **GE2218 Leisure, Recreation and Tourism (new)** |  
        | GE2220 Terrestrial and Coastal Environment  
        | GE2221 Nature and Society  
        | **GE2222 Politics and Space (new)** |  
        | GE2228 Weather and Climate  
        | GE2229 Water and the Environment  
        | GE2230 Energy Futures: Environment and Sustainability  
        | HY2235 Environmental History  
        | LSM2251 Ecology & Environment  
        | LSM2253 Applied Data Analysis in Ecology and Evolution  
        | PH2216* Environmental Philosophy  
        | PH2226 Concept of Nature in Inquiry  
        | RE2701 Urban Planning  
        | SC2221 Environment & Society |  
        | *Students have the choice to read both PH 2216 and PH 2226. However, only 4 MC can satisfy the programme requirements. The other 4 MC will count towards Unrestricted Elective. |  
| 3000   | ENV3101 Environmental Challenges: Asian Case Studies I  
         ENV3102 Environmental Challenges: Asian Case Studies II | 76 |
|        | Choose any 2 of the following modules with not more than 1 module from List A:  
        | LSM3252 Evolution and Comparative Genomics  
        | LSM3254 Ecology of Aquatic Environments  
        | LSM3255 Ecology of Terrestrial Environments  
        | LSM3256 Tropical Horticulture  
        | LSM3262 Environmental Animal Physiology  
        | LSM3263 Field Studies in Neotropical Ecosystems  
        | LSM3265 Entomology  
        | LSM3266 Avian Biology and Evolution  
        | LSM3267 Behavioural Biology |
LSM3288/LSM3289 Advanced UROPS in Life Sciences I/II or
ENV3202 Environmental Studies Internship Programme (4 MC)*

List A modules*

* Students have the choice to read both Internship and LSM3288/LSM3289. However, only 4 MC can satisfy the programme requirements. The other 4 MC (if student reads LSM3288 and internship) or 8 MC (if student reads LSM3288 and LSM3289, as well as Internship) will count towards Unrestricted Electives.

Choose any 2 of the following modules with not more than 1 module from List B:

<table>
<thead>
<tr>
<th>List B</th>
<th>104 - 105</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSM4260 Plankton Ecology (new)</td>
<td></td>
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<tr>
<td>LSM4261 Marine Biology</td>
<td></td>
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<tr>
<td>LSM4262 Tropical Conservation Biology</td>
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<tr>
<td>LSM4263 Field Studies in Biodiversity</td>
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<tr>
<td>LSM4264 Freshwater Biology</td>
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<tr>
<td>LSM4265 Urban Ecology</td>
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</tr>
</tbody>
</table>

List A:

GE3210 Natural Resources: Policy and Practice
GE3216 Applications of GIS and Remote Sensing
GE3227 Urban Climates
GE3231 Natural Hazards
GE3238: GIS Design and Practices
GE3246 Environmental Pollution
GE3226 Tourism and Development (new)
XD3103 Planet Earth
ESE3101 Solid and Hazardous Waste Management
ESE3201 Air Quality Management
ESE3301 Environmental Microbiological Principles
ESE3401 Waste and Wastewater Engineering 1
PF3302 Energy Management
PS3274 Environmental Politics
AR2723 Strategies for Sustainable Architecture
DSC3201/DOS3701 Supply Chain Management (new)
RE3901 Advanced Urban Planning (new)

List B:

GE4207 Coastal Management (5 MC)
GE4211 Advanced Hydrology and Water Resources Management (5 MC)
GE4212 Environmental Modelling (5 MC)
GE4214 Remote Sensing of Environment (5 MC)
GE4218 Interpreting Tourism Space and Cultures (5 MC, new)
GE4219 Development and Environment in Southeast Asia (5 MC)
GE4220 Field Investigation in Physical Geography (5 MC)
GE4221 Field Investigation in Human Geography (5 MC, new)
GE4222 Advanced Geomorphology (5 MC)
GE4223 Development of Geographical Thought (5 MC)
GE4227 Climate Change: Processes, Impact and Responses (5 MC)
GE4229 Earth Systems Science (5 MC)
GE4232 Global and Political Ecologies (5 MC, new)
GE4233 Geography in the Contemporary World (5 MC, new)
CE4231 Earth’s Climate: Science & Modelling
ESE4301 Wastewater Biotechnology
ESE4401 Water & Wastewater Engineering 2
ESE4402 Treatment Plant Hydraulics

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

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 modules read will be counted towards unrestricted electives.

Last update 16/9/19
# Programme Requirements for Bachelor of Environmental Studies
## (For Cohort AY18/19)
### Environmental Geography Specialisation

<table>
<thead>
<tr>
<th>Level</th>
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<th>Cumulative MCs</th>
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</table>
| 1000  | CM1402 General Chemistry  
EC1301 Principles of Economics  
ENV1101 Environmental Studies: An Interdisciplinary Overview  
GE1101E Geographical Journeys: Exploring World Environments  
MA1312 Calculus with Applications  
ST1232 Statistics to Life Sciences  
ENV1202 Communications for Environmental Studies | 28 |
| 2000/3000 | ENV2101 Global Environmental Change  
ENV2102 Environmental Law  
ENV2103 The Environment and Public Health  
LSM2252 Biodiversity  
**EC2383 Environmental Economics (new)**  
Choose 3 modules from the following list:  
ESE2401 Water Science & Technology  
GE2101 Methods and Practices in Geography  
GE2215 Introduction to GIS and Remote Sensing Methods  
**GE2218 Leisure, Recreation and Tourism (new)**  
GE2220 Terrestrial and Coastal Environment  
GE2221 Nature and Society  
**GE2222 Politics and Space (new)**  
GE2228 Weather and Climate  
GE2229 Water and the Environment  
GE2230 Energy Futures: Environment and Sustainability (new)  
HY2235 Environmental History  
LSM2251 Ecology & Environment  
LSM2253 Applied Data Analysis in Ecology and Evolution  
PH2216 Environmental Philosophy  
PH2226 Concept of Nature in Inquiry  
RE2701 Urban Planning  
SC2221 Environment & Society | 60 |
| 3000  | ENV3101 Environmental Challenges: Asian Case Studies I  
ENV3102 Environmental Challenges: Asian Case Studies II  
Choose any 2 of the following modules with not more than 1 module from List C:  
GE3210 Natural Resources: Policy and Practice  
GE3216 Applications of GIS and Remote Sensing  
**GE3226 Tourism and Development (new)**  
GE3227 Urban Climates  
GE3230A Field Studies in Geography: Southeast Asia (8 MC)†  
GE3231 Natural Hazards  
GE3238 GIS Design and Practices  
**GE3240 Geographical Research: Developing Ideas**  
GE3246 Environmental Pollution | 76 |

*Students have the choice to read both PH 2216 and PH 2226. However, only 4 MC can satisfy the programme requirements. The other 4 MC will count towards Unrestricted Elective.*
<table>
<thead>
<tr>
<th>XD3103 Planet Earth</th>
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<tbody>
<tr>
<td>GE3551 FASS UROP or</td>
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<tr>
<td>ENV3202 Environmental Studies Internship Programme (4 MC)</td>
</tr>
<tr>
<td>List C modules#</td>
</tr>
<tr>
<td>1 If students read GE3230A, they will be deemed to have fulfilled 2 out of the 3 modules.</td>
</tr>
<tr>
<td>* Students have the choice to read both internship and GE3551. However, only 4 MC can satisfy the programme requirement. The other 4 MC will count towards Unrestricted Electives.</td>
</tr>
</tbody>
</table>

| GE4401 Honours Thesis (15 MC) OR |
| Coursework option: Read an additional 3 Level 4000 GE-coded modules from elective list below (15 MC) |
| ENV4101 Environmental Management in Singapore |

Choose any 2 of the following modules with not more than 1 module from List D:

| GE4207 Coastal Management (5 MC) |
| GE4211 Advanced Hydrology and Water Resources Management (5 MC) |
| GE4212 Environmental Modelling (5 MC) |
| GE4214 Remote Sensing of Environment (5 MC) |
| GE4218 Interpreting Tourism Space and Cultures (5 MC, new) |
| GE4219 Development and Environment in Southeast Asia (5 MC) |
| GE4220 Field Investigation in Physical Geography (5 MC) |
| GE4221 Field Investigation in Human Geography (5 MC, new) |
| GE4222 Advanced Geomorphology (5 MC) |
| GE4223 Development of Geographical Thought (5 MC) |
| GE4227 Climate Change: Processes, Impact and Responses (5 MC) |
| GE4229 Earth Systems Science (5 MC) |
| GE4232 Global and Political Ecologies (5 MC, new) |
| GE4233 Geography in the Contemporary World (5 MC, new) |

List D modules#

Students who choose to read modules 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
- LSM3262 Environmental Animal Physiology
- LSM3263 Field Studies in Neotropical Ecosystems
- LSM3265 Entomology
- LSM3266 Avian Biology and Evolution
- LSM3267 Behavioural Biology
- ESE3101 Solid and Hazardous Waste Management
- ESE3201 Air Quality Management
- ESE3301 Environmental Microbiological Principles
- ESE3401 Waste and Wastewater Engineering 1
- PF3302 Energy Management
- PS3274 Environmental Politics
- AR2723 Strategies for Sustainable Architecture
- DSC3201/DOS3701 Supply Chain Management (new)
- RE3901 Advanced Urban Planning (new)

**List D:**
- LSM4254 Principles of Taxonomy and Systematics
- LSM4255 Methods in Mathematical Biology
- LSM4257 Aquatic Vertebrate Diversity
- LSM4260 Plankton Ecology (new)
- LSM4261 Marine Biology
- LSM4262 Tropical Conservation Biology
- LSM4263 Field Studies in Biodiversity
- LSM4264 Freshwater Biology
- LSM4265 Urban Ecology
- LSM4266 Aquatic Invertebrate Diversity (new)
- LSM4267 Animal Communications & Sensory Ecology
- LSM4268 Environmental Bioacoustics (new)
- CE4231 Earth’s Climate: Science and 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 modules read will be counted towards unrestricted electives.