

**Graduation Requirements for BES XDP – Cohorts AY2021/2022 to AY2023/2024  
(w.e.f. AY2024/2025 Semester 2)**

<b>Requirements</b>		<b>Units</b>
<b>CHS Common Curriculum Courses (including General Education)</b>		<b>44</b>
<ul style="list-style-type: none"> <li>- Asian Studies</li> <li>- Humanities</li> <li>- Social Sciences</li> <li>- Scientific Inquiry I</li> <li>- Data Literacy</li> </ul>	<ul style="list-style-type: none"> <li>- Artificial Intelligence</li> <li>- Communities and Engagement</li> <li>- Design Thinking</li> <li>- Scientific Inquiry II</li> <li>- Digital Literacy</li> <li>- Writing</li> </ul>	
<b>Integrated Core Courses – Pass 36 units as indicated</b>		<b>36</b>
ENV1101 Environmental Studies: An Interdisciplinary Overview		4
ENV2102 Environmental Law		4
ENV2103 The Environment and Public Health		4
ENV2301 Methods and Techniques for Environmental Studies		4
ENV2302 Communications for Environmental Studies		4
<b>Pass 2 of the following elective options:</b> ENV3101 Environmental Challenges in Asia. ENV3104 Socio-Ecological Assessment of Environmental Impacts ENV3202A Environmental Studies Internship Programme ENV3206 Evaluating Environmental Sustainability UROP(GE3551)/UOPS(LSM3288/R)/UROPES(ENV3288/R) – Refer to *Note 1		8
ENV3102 Field Course in Environmental Studies (or another interdisciplinary field course by approval) – Refer to *Note 2		4
ENV4101 Environmental Management in Singapore		4
<b>Common Core Courses – Pass 52 units as indicated</b>		<b>52</b>
GE2103 Our Planet: An Earth System Science Perspective		4
LSM3257 Applied Data Analysis in Ecology and Evolution		4
<b>Pass 4 Life Sciences LSM elective courses and 4 Geography GE elective courses from the respective lists below, encompassing:</b> <ul style="list-style-type: none"> <li>- 1 LSM22xx</li> <li>- 2 LSM32xx</li> <li>- 1 LSM42xx</li> <li>- 1 GE2xxx</li> <li>- 2 GE3xxx</li> <li>- 1 GE4xxx</li> </ul> Up to one LSM or GE course (of any level) can be fulfilled with an exchange enrichment course ENV2991/3991/4991 in place – Refer to *Note 3		32
LSM2251 Ecology and Environment	GE2101 Methods and Practices in Geography	
LSM2252 Biodiversity	GE2102 Politics, Economies And Space	
	GE2215 Introduction to GIS	
	GE2231 Living Space: Introducing Social and Cultural Geography	
LSM3252 Evolution and Comparative Genomics	GE3226 Tourism Development	
LSM3254 Ecology of Aquatic Environments	GE3231 Natural Hazards	
LSM3255 Ecology of Terrestrial Environments	GE3238 GIS Design and Practices	
LSM3256 Tropical Horticulture	GE3240 Geographical Research: Developing Ideas (*compulsory if taking GE4401)	

Requirements		Units
LSM3258 Comparative Botany	GE3250 Nature and Society	
LSM3259 Fungal Biology	GE3251 Southeast Asia	
LSM3265 Entomology	GE3253 Weather and Climate	
LSM3266 Avian Biology and Evolution	GE3254 Energy Futures: Environment and Sustainability	
LSM3267 Behavioural Biology	GE3255 Aquatic, Riparian and Coastal Systems	
	GE3256 Earth Surface Processes, Landforms and Ecosystems	
	GE3259 Applied Geographical Data Science	
LSM4251 Plant Growth and Development	GE4207 Coastal Management	
LSM4254 Principles of Taxonomy and Systematics	GE4211 Advanced Hydrology and Water Resources Management	
LSM4255 Methods in Mathematical Biology	GE4212 Environmental Modelling	
LSM4256 Evolution of Development	GE4214 Remote Sensing of Environment	
LSM4257 Aquatic Vertebrate Diversity	GE4218 Interpreting Tourism Spaces and Cultures	
LSM4261 Marine Biology	GE4219 Development and Environment in Southeast Asia	
LSM4262 Tropical Conservation Biology	GE4220 Field Investigation in Physical Geography	
LSM4263 Field Studies in Biodiversity	GE4221 Field Investigation in Human Geography	
LSM4264 Freshwater Biology	GE4222 Advanced Geomorphology	
LSM4266 Aquatic Invertebrate Diversity	GE4224 Conservation Biogeography	
LSM4267 Light & Vision in Animal Communication	GE4227 Climate Change: Processes, Impact and Responses	
LSM4268 Environmental Bioacoustics	GE4232 Global Political Ecologies	
	GE4233 Geography in the Contemporary World	
	GE4234 Environmental Changes in the Tropics	
	GE4235 Urban Climates	
	GE4237 Environmental Pollution	
	GE4239 Coastal Dynamics	
	GE4240 Spatial Decision-Making	
	GE4241 Spatial Health	
<b>Pass 8 units of Compulsory Level 4000:</b> <ul style="list-style-type: none"> <li>- LSM4288E Research Project in Life Sciences (Ecology, Evolution and Biodiversity); OR</li> <li>- GE4401 Honours Thesis; OR</li> <li>- 8 units of Level 4000 Common Core Courses of LSM42xx and/or GE4xxx elective courses listed above.</li> </ul>		8
<b>Pass 1 ENV-Recognised Course – Refer to *Note 4</b>		4
<b>Unrestricted Electives</b>		<b>28</b>
<b>Total Units for Graduation Requirements</b>		<b>160</b>

**\*Note 1:** For UROP(GE3551)/UOPS(LSM3288/R)/UOPES(ENV3288/R) - only 4 units of these undergraduate research project options can be counted towards the Integrated Core Courses.

**\*Note 2:** An alternative field course can be substituted on approval. An appropriate substitution for the field course would need to be at least 10 days in length, pitched at Level 2000, 3000 or 4000, be themed around environmental issues, and be multidisciplinary or interdisciplinary in content. Field course done during a study abroad segment, if appropriate, can be considered.

The following courses are approved as appropriate substitutes by default:

GEN2007 Resilience in Restoration
GE3230A Field Studies in Southeast Asia – this course weighs 8 Units, wherein only 4 Units will be counted towards the Integrated Core Courses as a substitute for ENV3102, and the remaining 4 Units will count towards the Common Core GE Level 3000 requirement
GE4221 Field Investigation in Human Geography
GE4220 Field Investigation in Physical Geography

Admission into GE3230A, GE4221, and GE4220 will be approved by the course coordinator and is dependent on the number of vacancies in the course.

**\*Note 3:** Students going on study abroad programmes may map their partner university courses to the ENV exchange enrichment course codes ENV2991, ENV3991, and ENV4991. A maximum of two exchange enrichment courses can be counted towards BES Major requirements:

- One can be counted towards the Common Core elective options, replacing a LSM or GE course of any level.
- One can be counted towards the ENV-Recognised Course.

Any others will be counted as Unrestricted Electives. A course code can only be used once.

**\*Note 4:** Below lists the acceptable ENV-Recognised Courses.

#### **List of ENV-Recognised Courses**

AN2203 Peoples and Cultures of Southeast Asia
AN2206 Humans and Natures
EC2383 Environmental Economics
ESE2000 Chemistry for an Environmentally Sustainable Future
ESE3101 Resource Management and Circular Economy
ESE3201 Air Quality in Changing Environments
ESE3301 Microbiology in Natural and Built Environments
GEN2004 Green Communities in Action: Climate, Species, Crisis
GL3203 Global Socio-environmental Entanglements
HY2235 Environmental History
JS2234 Japan: The Green Nation?
LAD2004 Planting Design and Horticulture
LAD3006 Basics of Ecology
PC3442 Weather and Climate Fundamentals
PH2216 Environmental Philosophy
PH2226 Concept of Nature in Inquiry
PF3504 Sustainable Energy Management

PS3274 Environmental Politics
RE2701 Urban Planning
RE3901 Advanced Urban Planning
SC3212 Southeast Asia in a Globalizing World
ENV2991 Exchange Enrichment Course
ENV3991 Exchange Enrichment Course
ENV4991 Exchange Enrichment Course