

**Courses taken by students in Society and the Earth Systems Specialisation (from AY21-22 onwards)**

<b>Major Core</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>AUs</b>
ES0001	The Physical Environments of Singapore	3
ES0138	Introduction to Scientific Writing	2
ES1001	E2S2 Environment and Society	4
ES1003	E2S2 Solid Earth	4
ES1006	Introductory Field Experience	4
ES1007	Climate Change	3
ES2001	Computational Earth Systems Science	4
ES2003	E2S2 Biosphere	4
ES2802	GIS and the Earth System	3
MH1802	Calculus for the Sciences	4

<b>Additional Major Core</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>AUs</b>
BS1001	Introductory Biology	3
ES2201	Law & Economics, Sustainable Development, and Environmental Protection	3
ES2202	Global Environmental Politics and Governance	3
ES2303	Introduction to Ecology	3
ES3201	Coupled Human and Natural Systems	3
ES3202	Resilient Urban Systems	3
HE9091	Principles of Economics	3
MH3511	Data Analysis with Computer	3

Students will take all the Major Core and Additional Major Core courses listed

<b>Major PE</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>AUs</b>
BS1005	Biochemistry I	3
BS1008	Bioinformatics and Statistics	3
BS2002	Microbiology	3
CM1001	Foundations of Chemistry I	4
CM1002	Foundations of Chemistry II	4
CM2011	Analytical and Bioanalytical Chemistry	3
EN1001	Environmental Chemistry	3
EM5101	Environmental Quality	3
EM5106	Environmental Impact Assessment	3
ES2002	Earth Materials	3
ES2004	Sedimentary Geology	3
ES2005	Geology of Earthquakes	3
ES2101	Introduction to Geological Field Mapping	3
ES2301	Principles of Heredity and Ecological Genetics	3
ES2302	Introduction to Field Ecology	2
ES2304	Microbes on Natural Ecosystems	3

ES2801	Introduction to Natural Hazards	3
ES3002	Structural Geology and Tectonics	3
ES3003	Introduction to Geochemistry	3
ES3004	Introduction to Geophysics	3
ES3005	Advanced Field Course in Geology	5
ES3008	E2S2 Research	3
ES3101	Petroleum Geology	3
ES3102	Global Tectonics	3
ES3103	Sea-level Rise & Coastal Processes	3
ES3301	Plant and Animal Physiology	3
ES3302	Tropical Ecology	3
ES3303	Environmental Biotechnology	3
ES3304	Advanced Placement in Ecology and Society	2
ES3305	Current Issues in Ecology	3
ES3306	Global Change Ecology	3
ES3307	Experimental Design & Analysis for Ecology	3
ES3801	Biogeochemistry	3
ES4002	Final Year Project	10
ES4003	Professional Internship	10
ES4004	Overseas Entrepreneurship Prog (12-month)	20
ES4006	Overseas Entrepreneurship Prog (6-month)	11
ES4010	Teaching in E2S2	4
ES4201	Environmental Management and Valuation	3
ES4301	Conservation Biology and Biodiversity	3
ES4303	Marine and Aquatic Ecology	3
ES4901	Oceanography	3
ES4902	Geophysical Data Analysis	3
ES4904	Volcanology	3
ES4911	Seismology	3
HP1100	Fundamentals of Social Science Research	3
HS2022	Population and Society	3
HS2023	Environment and Sociology	3
HE3005	Environmental Economics	3
MH2500	Probability and Introduction to Statistics	4
PH1104 or PH1801	Mechanics or Foundations of Physics I	3
PH1106 or PH1802	Electricity and Magnetism or Foundations of Physics II	3
PH1105	Optics, Vibrations and Waves	3
PH1107	Relativity and Quantum Physics	3

Students from Society and the Earth System specialization will choose 27 AUs from the Major-PE.

### ICC (University Level)

Courses	No of AU	Semester
Inquiry and Communication in an Interdisciplinary World	2	Year 1 Sem 1
Ethics & Civics in a Multi-Cultural World	2	Year 1 Sem 1
Navigating the Digital World	2	Year 1 Sem 2
Healthy Living & Mental Wellbeing	3	Year 1 Sem 2
Career & Entrepreneurial Development for the Future World	2	Year 2 Sem 2
Science & Technology for Humanity	3	Year 2 Sem 1
Sustainability: Human, Social, Economic & Environment	3	Year 2 Sem 1
<b>Total AU</b>	<b>17</b>	

### ICC (College Level)

Courses	No of AU	Semester
Fundamentals of Data Science for Earth and Environmental Systems Science	3	Year 3 Sem 2
Communication course	2	Year 3
Professional Attachment	5	Year 4
<b>Total AU</b>	<b>10</b>	

Programme Title	Year of Study	Number of Academic Units (AUs)					Total
		Major Requirement		Interdisciplinary Collaborative Core		Broadening and Deepening Electives	
		Core	Major Prescribed Electives	Common Core	Foundational Core		
Environmental Earth System Science (Society and the Earth Systems specialisation)	1	24	7	9			40
	2	26	6	8			40
	3	9	10		5	8	32
	4		4		5	14	23
	<b>Total</b>	<b>59</b>	<b>27</b>	<b>17</b>	<b>10</b>	<b>22</b>	<b>135</b>

Proposed timetable for students in EESS Society and the Earth Systems Specialisation (AY21-22 onwards)

	Course Code	Course Title	Type	AU
Year 1 Semester 1	ES0138	Introduction to Scientific Writing	Core	2
	BS1001	Introductory Biology	Core	3
	ES1001	E2S2 Environment and Society	Core	4
	MH1802	Calculus for the Sciences	Core	4
	CC0001	Inquiry and Communication in an Interdisciplinary World	ICC	2
	CC0003	Ethics & Civics in a Multi-Cultural World	ICC	2
	XXX	MAJOR PE	Major PE	3
				Total AUs

	Course Code	Course Title	Type	AU
Year 1 Semester 2	ES1003	E2S2 Solid Earth	Core	4
	ES1007	Climate Change	Core	3
	ES2003	E2S2 Biosphere	Core	4
	CC0002	Navigating the Digital World	ICC	2
	CC0005	Healthy Living & Mental Wellbeing	ICC	3
	XXX	MAJOR PE	Major PE	4
				Total AUs

	Course Code	Course Title	Type	AU
Year 2 Semester 1	ES1006	Introductory Field Experience	Core	4
	ES2001	Computational Earth Systems Science	Core	4
	ES2802	GIS and the Earth System	Core	3
	HE9091	Principles of Economics	Core	3
	CC0006	Sustainability: Human, Social, Economic & Environment	ICC	3
	CC0007	Science & Technology for Humanity	ICC	3
	XXX	MAJOR PE	MPE	3
			Total AUs	<b>23</b>

	Course Code	Course Title	Type	AU
Year 2 Semester 2	ES0001	The Physical Environments of Singapore	Core	3
	ES2303	Introduction to Ecology	Core	3
	ES2201	Law & Economics, Sustainable Development and Environmental Protection	Core	3
	ES2202*	Global Environmental Politics and Governance	Core	3
	ML0004	Career & Entrepreneurial Development for the Future World	ICC	2
	XXX	MAJOR PE	Major PE	3
			Total AUs	<b>17</b>

	Course Code	Course Title	Type	AU
Year 3 Semester 1	ES3202	Resilient Urban Systems	Core	3
	XXX	Broadening Elective	BE	3
	XXX	Broadening Elective	BE	3
	XXX	MAJOR PE	MPE	3
	XXX	MAJOR PE	MPE	4
			Total AUs	<b>16</b>

<b>Year 3 Semester 2</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Type</b>	<b>AU</b>
	ES3201*	Coupled Human and Natural Systems	Core	3
	MH3511	Data Analysis with Computer	Core	3
	ICC	Second Communication Course	ICC	2
	ES0002	Fundamentals of Data Science for Earth and Environmental Systems Science	ICC	3
	XXX	Broadening Elective	BE	2
	XXX	MAJOR PE	MPE	3
				Total AUs

<b>Year 4 Semester 1</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Type</b>	<b>AU</b>
	XXX	MAJOR PE	MPE	4
	XXX	Broadening Elective	BE	3
	XXX	Broadening Elective	BE	3
	XXX	Broadening Elective	BE	4
			Total AUs	<b>14</b>

<b>Year 4 Semester 2</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Type</b>	<b>AU</b>
	ES4007	Professional Attachment	ICC	5
	XXXX	Broadening Elective	BE	4
			Total AUs	<b>9</b>