

Curriculum for students admitted in AY2017/18 onwards

Ecology and the Ecosystems Specialisation

Major Core		
Course Code	Course Title	AUs
ES1001	E2S2 Environment and Society	4
ES1003	E2S2 Solid Earth	4
ES1006	Introductory Field Experience	4
ES1007	E2S2 Oceans, Atmosphere and Climate	4
ES2001	Computational Earth Systems Science	4
ES2003	E2S2 Biosphere	4
ES2802	GIS and the Earth System	3
ES3001	Futures in E2S2	1
MH1802	Calculus for the Sciences	4

Additional Major Core		
Course Code	Course Title	AUs
BS1001	Introductory Biology	3
BS1008	Bioinformatics and Statistics	3
BS2002	Microbiology	3
CM1021	Basic Inorganic Chemistry	4
CM1031	Basic Organic Chemistry	4
ES2301	Principles of Heredity and Ecological Genetics	4
ES2303	Introduction to Ecology	3
ES2302	Introduction to Field Ecology	2
ES3301	Plant and Animal Physiology	4
ES4301	Conservation Biology and Biodiversity	3

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

Major-PE		
Course Code	Course Title	AUs
CM1041	Basic Physical Chemistry	4
CM2011	Analytical and Bioanalytical Chemistry	3
EN1001	Environmental Chemistry	3
ES2002	Earth Materials	4
ES2004	Layers and Landforms	4
ES2101	Introduction to Geological Field Mapping	2
ES2201	Law & Economics, Sustainable Development, and Environmental Protection	3
ES2202	Global Environmental Politics and Governance	4
ES3002	Structural Geology and Tectonics	4
ES3003	Introduction to Geochemistry	4
ES3004	Introduction to Geophysics	4
ES3005	Advanced Field Course in Geology	5
ES3008	E2S2 Research	3
ES3101	Petroleum Geology of South East Asia	4
ES3201	Coupled Human and Natural Systems	4
ES3302	Tropical Ecology	3
ES3303	Environmental Biotechnology	3
ES4002	Final Year Project	8
ES4003	Industrial Attachment	8
ES4006	Volcanic Processes	3
ES4008	Teaching in E2S2	4
ES4302	Environmental Genomics	4
ES4303	Marine and Aquatic Ecology	3
ES4901	Oceanography	3
ES4902	Geophysical Data Analysis	3

ES4903	Introduction to Atmospheric Chemistry	3
ES4904	Seismology	3
ES4905	Mathematical Foundations in Geophysics	3
ES4906	Isotope Geochemistry	4
ES4907	Geophysical Inverse Theory	3
ES4908	Advanced Research Skills in Earth Systems Science	1
ES4909	Continuum Mechanics	3
ES4910	Lithosphere Deformation Mechanics	3
MH2500	Probability and Introduction to Statistics	4
PH1104	Mechanics	3
PH1105	Optics, Vibrations and Waves	3
PH1106	Electricity and Magnetism	3
PH1107	Relativity and Quantum Physics	3
PH1801	Foundation of Physics I	3
PH1802	Foundation of Physics II	3

Students from Ecology specialization will choose 22 AUs from the Major-PE. At least two course must be Tropical Ecology, Marine and Aquatic Ecology, Environmental Genomics or Environmental Biotechnology.

If students have not passed Chemistry at A-level or equivalent, they will be required to take EN1001 as part of Major-PE. Other students may not take this EN1001. If students have not passed Physics at A-level or equivalent, they will be required to take PH1801 as part of Major-PE. Other students may not take PH1801.