

**Curriculum for students admitted in AY2017/18 onwards**

**Geosciences Specialisation**

<b>Major Core</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>AUs</b>
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

<b>Additional Major Core</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>AUs</b>
ES2002	Earth Materials	4
ES2004	Layers and Landforms	4
ES2101	Introduction to Geological Field Mapping	2
ES3002	Structural Geology and Tectonics	4
ES3003	Introduction to Geochemistry	4
ES3004	Introduction to Geophysics	4
ES3005	Advanced Field Course in Geology	5

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

<b>Major-PE</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>AUs</b>
BS1001	Introductory Biology	3
BS1005	Biochemistry I	3
BS1008	Bioinformatics and Statistics	3
BS2002	Microbiology	3
CM1021	Basic Inorganic Chemistry	4
CM1031	Basic Organic Chemistry	4
CM1041	Basic Physical Chemistry	4
CM2011	Analytical and Bioanalytical Chemistry	3
CV1011	Mechanics of Materials	4
CV1012	Fluid Mechanics	3
CV2014	Geotechnical Engineering	3
CV2016	Hydrology	3
ES2201	Law and Economics, Sustainable Development, and Environmental Protection	3
ES2202	Global Environmental Politics and Governance	4
ES2301	Principles of Heredity and Ecological Genetics	4
ES2302	Introduction to Field Ecology	2
ES2303	Introduction to Ecology	3
ES3008	E2S2 Research	3
ES3101	Petroleum Geology of South East Asia	4
ES3201	Coupled Human and Natural Systems	4
ES3301	Plant and Animal Physiology	4
ES3302	Tropical Ecology	3
ES3303	Environmental Biotechnology	3
ES4002	Final Year Project	8
ES4003	Industrial Attachment	10

ES4006	Volcanic Processes	3
ES4008	Teaching in E2S2	4
ES4302	Environmental Genomics	3
ES4303	Marine and Aquatic Ecology	4
ES4901	Oceanography	3
ES4902	Geophysical Data Analysis	3
ES4903	Introduction to Atmospheric Chemistry	4
ES4904	Seismology	3
ES4905	Mathematical Foundations in Geophysics	3
ES4906	Isotope Geochemistry	3
ES4907	Geophysical Inverse Theory	3
ES4908	Advanced Research Skills in Earth Systems Science	3
ES4909	Continuum Mechanics	1
ES4910	Lithosphere Deformation Mechanics	4
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 Geosciences specialization will choose 28 AUs from the Major-PE. Students must take at least 13 AUs of Basic Sciences courses (BS/CM/PH).

If students have not passed Chemistry at A-level or equivalent, they will be required to take CM1021 as part of Major-PE. If students have not passed Physics at A-level or equivalent, they will be required to take PH1801. Other students may not take PH1801.