



NUI Galway
OÉ Gaillimh

College of Science

Fullscreen

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BSc EARTH & OCEAN SCIENCES



www.nuigalway.ie/science

Overview

Year 1	Year 2	Year 3	Year 4
[60 Credits]	[60 credits]	[60 credits]	[60 credits]
<p>There are 45 credits of Core modules.</p> <p>Choose one module to a value of 15 credits:</p> <p>Mathematics (Honours) or Mathematical Studies</p> <p>Applied Mathematics</p>	<p>There are 25 credits of Core modules.</p> <p>Choose one Pathway to a value of 20 credits:</p> <p>Applied Mathematics</p> <p>Botany and Plant Science</p> <p>Chemistry</p> <p>Mathematical Studies</p> <p>Mathematics</p> <p>Microbiology</p> <p>Physics and Applied Physics</p> <p>Zoology</p> <p>Choose Electives to a value of 15 credits from the list available.</p>	<p>There are 45 credits of Core modules.</p> <p>Choose Electives up to a value of 15 credits from the list available.</p>	<p>There are 40 credits of core modules.</p> <p>Choose four modules to a value of 20 credits from the list available.</p>

BSc Earth and Ocean Sciences

Year 1	Year 2	Year 3	Year 4
[Core 45 credits; Options: 15 credits]	[Core: 25 credits; Pathway: 20 credits; Electives: 15 credits]	[Core: 45 credits; Options: 15 credits]	[Core: 10 Credits; Options: 50 Credits]
<p>Full Year – Semester 1 and Semester 2</p> <p>MP180 Applied Mathematics [15]*</p> <ul style="list-style-type: none"> • Continuous Assessment (Summer) • Written Paper 1 (Semester 1) • Written Paper 2 (Semester 2) <p>BO101 Biology [15]</p> <ul style="list-style-type: none"> • Continuous Assessment (Summer) • Written Paper 1 - Semester 1 • Written Paper 2 - Semester 2 <p>CH130 Chemistry: The World of the Molecule [15]</p> <ul style="list-style-type: none"> • Written Paper 1 (Semester 1) • Written Papers 2 (Semester 2) • Continuous Assessment (Summer) <p>MA161 Mathematical Studies [15]*</p> <ul style="list-style-type: none"> • Continuous Assessment (Summer) • Written Paper 1 (Semester 1) • Written Paper 2 (Semester 2) <p>MA180 Mathematics (Honours) [15]*</p> <ul style="list-style-type: none"> • Continuous Assessment (Summer) • Written Paper 1 (Semester 1) • Written Paper 2 (Semester 2) <p>PH101 Physics [15]</p> <ul style="list-style-type: none"> • Continuous Assessment Summer • Written Paper 1 - Semester 1 • Written Paper 2 - Semester 2 	<p>Semester 1</p> <p>EOS213: Introduction to Ocean Science [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>-----</p> <p>Semester 2</p> <p>EOS222 Ancient Earth Environments [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS2101 Introduction to Field Skills [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS225 Optical Microscopy of Minerals and Rocks [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper • Practical Exam 	<p>Semester 1</p> <p>EOS305 Introduction to Applied Field Hydrology [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS3103 Palaeontology and Evolution [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS323 Sediments and the Sedimentary Record [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS3105 The Crystalline Crust [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>-----</p> <p>Semester 2</p> <p>EOS304 Aquatic Geochemistry [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS3102 Environmental and Marine Geophysical Remote Sensing [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS3104 Fieldskills Training [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Practical Exam <p>EOS3101 Geological Structures and Maps [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS303 Ocean Dynamics [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper 	<p>Semester 1</p> <p>EOS418 Applied Field Hydrogeology [5]*</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS4102 EOS Minor Final Year Project [10]*</p> <ul style="list-style-type: none"> • Continuous Assessment • Departmental Assessment • Project <p>EOS403 Final Year Project [20]*</p> <ul style="list-style-type: none"> • Continuous Assessment • Project <p>EOS402 Global Change [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS422 Sedimentary Basins [5]*</p> <ul style="list-style-type: none"> • Written Paper <p>-----</p> <p>Semester 2</p> <p>EOS4103 Advanced Fieldskills [5]</p> <ul style="list-style-type: none"> • Continuous Assessment <p>EOS409 Biophysical Interactions in the Ocean [5]*</p> <ul style="list-style-type: none"> • Continuous Assessment • Departmental Assessment • Written Paper <p>EOS4101 Earth Observation and Remote Sensing [5]*</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>EOS407 History of Life [5]*</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper

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			EOS4104 Geomechanics & Resources [5]* <ul style="list-style-type: none"> • <i>Continuous Assessment</i> • <i>Written Paper</i>
* Select one 15-credit modules			* Assigned one project module: EOS403 [20] or EOS4102 [10] If allocated EOS4102, select elective modules to a value of 10 credits.

ELECTIVES

Year 1	Year 2	Year 3	Year 4
	<p><u>Full Year – Semester 1 and Semester 2</u></p> <p>FR252 French [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>GR224 Beginner's German for Science [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>GR252 German [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>GR353 German [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>-----</p> <p><u>Semester 1</u></p> <p>BO202 Evolution and the Tree of Life [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>BO201 Molecular and Cellular Biology [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>BO2101 Scientific Writing Skills [5]</p> <ul style="list-style-type: none"> • Continuous Assessment <p>BPS202 Fundamentals in Aquatic Plant Science [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>LN2210 Scileanna Gaeilge don Eolaíochta 1 [5]</p> <ul style="list-style-type: none"> • Measúnú leanúnach • Scrúdú Roinne <p>MA284 Discrete Mathematics [5]</p> <ul style="list-style-type: none"> • Written Paper <p>MA211 Calculus I [5]</p> <ul style="list-style-type: none"> • Written Paper <p>Continued...</p>	<p><u>Full Year – Semester 1 and Semester 2</u></p> <p>FR365 Advanced French for Science [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>GR224 Beginner's German for Science [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>GR252 German [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>GR353 German [10]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper (Summer) <p>-----</p> <p><u>Semester 1</u></p> <p>PAB3101 Soil Science [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>LN2210 Scileanna Gaeilge don Eolaíochta 1 [5]</p> <ul style="list-style-type: none"> • Measúnú leanúnach • Scrúdú Roinne <p>MA301 Advanced Calculus [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>MA313 Linear Algebra I [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>MP231 Mathematical Methods I [5]</p> <ul style="list-style-type: none"> • Written Paper <p>MP345 Mathematical Methods I [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>PH328 Physics of the Environment I [5]</p> <ul style="list-style-type: none"> • Written Paper <p>Continued...</p>	<p><u>Semester 1</u></p> <p>BPS402 Current Topics in Algal Research [5]</p> <ul style="list-style-type: none"> • Written Paper <p>BPS4103 Plant Cell [5]</p> <ul style="list-style-type: none"> • Written Paper <p>BPS4104 Primary Productivity and Global Change [5]</p> <ul style="list-style-type: none"> • Written Paper <p>PAB4103 Climate Change, Plants & Agriculture [5]</p> <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>TI3115 Coastal Dynamics [5]</p> <ul style="list-style-type: none"> • Continuous Assessment <p>ZO415 Biometry [5]</p> <ul style="list-style-type: none"> • Continuous Assessment <p>ZO418 Phylogenetics & Conservation [5]</p> <ul style="list-style-type: none"> • Written Paper (Summer)

	<p>MA215 Mathematical Molecular Biology I [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> <p>MP231 Mathematical Methods I [5] <ul style="list-style-type: none"> • Written Paper </p> <p>MP236 Mechanics I [5] <ul style="list-style-type: none"> • Written Paper </p> <p>ST237 Introduction to Statistical Data and Probability [5] <ul style="list-style-type: none"> • Written Paper <p>-----</p> <p><u>Semester 2</u></p> <p>BPS203 Plant Diversity, Physiology & Adaptation [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> <p>LN2211 Scileanna Gaeilge don Eolaíochta 2 [5] <ul style="list-style-type: none"> • Measúnú leanúnach • Scrúdú Roinne </p> <p>MA203 Linear Algebra [5] <ul style="list-style-type: none"> • Continuous Assessment • Paper 1 - Written </p> <p>MA212 Calculus II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>MA216 Mathematical Molecular Biology II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>MP232 Mathematical Methods II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>MP237 Mechanics II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>PAB2101 AgriBiosciences [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> <p>ST238 Introduction to Statistical Inference [5] <ul style="list-style-type: none"> • Paper 1 - Written </p> </p>	<p>ZO317 Evolutionary Biology [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> <p>ZO319 Marine Zoology [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper <p>-----</p> <p><u>Semester 2</u></p> <p>MA302 Complex Variable [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> <p>LN2211 Scileanna Gaeilge don Eolaíochta 2 [5] <ul style="list-style-type: none"> • Measúnú leanúnach • Scrúdú Roinne </p> <p>MA335 Algebraic Structures [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> <p>MP232 Mathematical Methods II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>MP346 Mathematical Methods II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>PH329 Physics of the Environment II [5] <ul style="list-style-type: none"> • Written Paper </p> <p>ZO318 Geographic Information Systems and Biostatistics [5] <ul style="list-style-type: none"> • Continuous Assessment • Written Paper </p> </p>	

BSc Earth and Ocean Sciences – Year 2 Pathways

Applied Mathematics	Botany and Plant Science	Chemistry Pathway	Mathematical Studies Pathway
[Pathway: 20 credits]	[Pathway: 20 credits]	[Pathway: 20 credits]	[Pathway: 20 credits]
<p><u>Semester 1</u></p> <p>MP231 Mathematical Methods I [5] • Written Paper</p> <p>MP236 Mechanics I [5] • Written Paper</p> <p>-----</p> <p><u>Semester 2</u></p> <p>MP232 Mathematical Methods II [5] • Written Paper</p> <p>MP237 Mechanics II [5] • Written Paper</p>	<p><u>Semester 1</u></p> <p>BO202 Evolution and the Tree of Life [5] • Continuous Assessment • Written Paper</p> <p>BPS202 Fundamentals in Aquatic Plant Science [5] • Continuous Assessment • Written Paper</p> <p>BO201 Molecular and Cellular Biology [5] • Continuous Assessment • Written Paper</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BPS203 Plant Diversity, Physiology and Adaptation [5] • Continuous Assessment • Written Paper</p>	<p><u>Semester 1</u></p> <p>CH204 Inorganic Chemistry [5] • Continuous Assessment • Written Paper</p> <p>CH203 Physical Chemistry [5] • Continuous Assessment • Written Paper</p> <p>-----</p> <p><u>Semester 2</u></p> <p>CH205 Analytical and Environmental Chemistry [5] • Continuous Assessment • Written Paper</p> <p>CH202 Organic Chemistry [5] • Continuous Assessment • Written Paper</p>	<p><u>Semester 1</u></p> <p>MA211 Calculus I [5] • Written Paper</p> <p>MA204 Discrete Mathematics [5] • Written Paper</p> <p>-----</p> <p><u>Semester 2</u></p> <p>MA212 Calculus II [5] • Written Paper</p> <p>MA203 Linear Algebra [5] • Continuous Assessment • Written Paper</p>

BSc Earth and Ocean Sciences – Year 2 Pathways

Mathematics	Microbiology Pathway	Physics and Applied Physics Pathway	Zoology Pathway
[Pathway: 20 credits]	[Pathway: 20 credits]	[Pathway: 20 credits]	[Pathway: 20 credits]
<p><u>Semester 1</u></p> <p>MA284 Discrete Mathematics [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>MA2286 Differential Forms [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>-----</p> <p><u>Semester 2</u></p> <p>MA283 Algebra [5]</p> <ul style="list-style-type: none"> Written Paper <p>MA2287 Complex Analysis [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper 	<p><u>Semester 1</u></p> <p>MI202 Laboratory Skills in Microbiology I [5]</p> <ul style="list-style-type: none"> Continuous Assessment <p>BO201 Molecular and Cellular Biology (MCB) [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>-----</p> <p><u>Semester 2</u></p> <p>MI203 Laboratory Skills in Microbiology II [5]</p> <ul style="list-style-type: none"> Continuous Assessment <p>MI204 Microbes and the Environment [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper 	<p><u>Semester 1</u></p> <p>PH2101 Mechanics and Electromagnetism [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>PH2102 Physics Laboratory and Problem Solving I [5]</p> <ul style="list-style-type: none"> Continuous Assessment <p>-----</p> <p><u>Semester 2</u></p> <p>PH2103 Thermodynamics & Atomic Physics [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>PH2104 Physics Laboratory and Problem Solving II [5]</p> <ul style="list-style-type: none"> Continuous Assessment 	<p><u>Semester 1</u></p> <p>BO202 Evolution and the Tree of Life [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>BO201 Molecular and Cellular Biology [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>-----</p> <p><u>Semester 2</u></p> <p>ZO208 Invertebrate Biology [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper <p>ZO209 Vertebrate Zoology [5]</p> <ul style="list-style-type: none"> Continuous Assessment Written Paper