

## MPhys with Maths - Programme Structure

<b>Part 1</b>									
<b>Semester 1</b>					<b>Semester 2</b>				
	ECTS	FHEQ				ECTS	FHEQ		
PHYS1015	†	5	4	Motion and relativity	PHYS1011	†	5	4	Waves, light & quanta
PHYS1017	†	5	4	Physics Skills 1	PHYS1013	†	5	4	Energy & matter
PHYS1022	†	5	4	Electricity and Magnetism	PHYS1019	†	5	4	Physics Skills 2
MATH1006	†	7.5	4	Introduction to Mathematical Methods	MATH1007	†	7.5	4	Mathematical Methods for Physical Science
MATH1048	†	7.5	4	Linear Algebra 1	MATH1049	†	7.5	4	Linear Algebra 2

<b>Part 2</b>									
<b>Semester 1</b>					<b>Semester 2</b>				
	ECTS	FHEQ				ECTS	FHEQ		
PHYS2003	†	7.5	5	Quantum Physics	PHYS2001	†	7.5	5	Electromagnetism
PHYS2022	†	7.5	5	Physics from Evidence 1	PHYS2006	†	7.5	5	Classical Mechanics
PHYS2023	†	7.5	5	Wave Physics	PHYS2024	†	7.5	5	Quantum Physics of Matter
MATH2045	†	7.5	5	Vector Calculus and Complex Variable Theory	MATH2038	†	7.5	5	Partial Differential Equations

<b>Part 3</b>									
<b>Semester 1</b>					<b>Semester 2</b>				
	ECTS	FHEQ				ECTS	FHEQ		
PHYS3004	†	7.5	6	Crystalline Solids	PHYS3002	†	7.5	6	Nuclei & Particles
PHYS3008	†	7.5	6	Atomic Physics	PHYS3007	†	7.5	6	Theories of Matter, Space and Time
PHYS6009	‡	7.5	7	Dissertation	PHYS6008 or	‡	7.5	7	Physics from Evidence 2
MATH3018	†	7.5	6	Numerical Methods	PHYS6017	‡	7.5	7	Computer Techniques
					MATH3006	†	7.5	6	Relativity, Black Holes & Cosmology

<b>Part 4</b>									
<b>Semester 1</b>					<b>Semester 2</b>				
	ECTS	FHEQ				ECTS	FHEQ		
PHYS6006	†	15	7	MPhys Project (continues through semester 2)					
OPTION	7.5	7	1	option module	PHYS6015	‡	7.5	7	MPhys Synoptic Exam
OPTION	7.5	7	1	option module	MATH6149	‡	7.5	7	Modelling with Differential Equations
					MATH6107 or	‡	7.5	7	Gravitational Waves
OPTION	7.5	6/7	1	option module	MATH6139	‡	7.5	6/7	Advanced General Relativity

FHEQ levels for options are illustrative, other configurations are possible, but must meet university regulations on forward/back-tracking, and final ECTS accumulation for award ( <http://www.calendar.soton.ac.uk/sectionIV/cats.html>)

Status † Core module - must be taken and passed before progression to next level or award  
‡ Compulsory module - must be taken before progression to next level or award