These programme regulations should be read in conjunction with the University's core regulations for undergraduate programmes, and the marking and classification conventions for undergraduate programmes.

MSci Natural Sciences (FGC0)

1. This programme is available at Durham City, in a full-time mode of study.
2. The MSci in Natural Sciences allows candidates to take modules from two or more subjects in a four year programme.
3. The range of subjects is limited for candidates entering in October 2016 to those shown discussed in paragraph 2 of the BSc Natural Sciences programme (CFG0).
4. Candidates are allowed to take modules from a single subject in the final year if they have the appropriate prerequisites.
5. This programme is available at Durham City, in a full-time mode of study.
6. All module selections must be approved by the Deputy Head of Faculty (Natural Sciences) or by their nominee and be compatible in the timetable.
7. The degree certificate issued to successful candidates who have not taken an MSci Joint Honours degree shall list all subjects in which they have taken at least 40 credits during the final three levels of the programme.
8. Candidates entering on or after October 2015 may take no more than 20 credits delivered by the University's Centre for Foreign Language Study in Levels 1 and 2. For candidates entering on or before October 2014 may take no more than 40 credits delivered by the University's Centre for Foreign Language Study across Levels 1, 2 and 3.

Level 1 (Certificate)

9. Candidates are limited to the range of subjects shown in the table under paragraph 24, Sport, languages offered by the University's Centre for Foreign Language Study and Education which excludes any History of Art module.
10. Candidates take modules: from at least two subjects; from not more than four subjects; to a maximum of 80 credits per subject. The selection must include at least one subject in which Level 4 modules are available.
11. Candidates may take no more than 20 credits of language modules offered by the University's Centre for Foreign Language Study.

Level 2 (Diploma)

12. Candidates take modules: from at least two subjects; from not more than three subjects; with at least 40 credits each in at least two subjects; to a maximum of 80 credits per subject. The selection must include at least one subject in which Level 4 modules are available.
13. In accordance with the core regulations, candidates are normally permitted to study Level 1 modules up to the value of 30 credits.
14. Candidates may take no more 20 credits of language modules offered by the University's Centre for Foreign Language Study.
15. Candidates who wish to take modules from outside the BSc Joint-Honours combinations must take a minimum of 40 credits.
16. Candidates who take 60 credits of Level 2 Earth Sciences are required to take additional tutorials as determined by the Department of Earth Sciences.

Level 3 (Degree)

17. Candidates take modules: from at least two subjects; from not more than three subjects; to a maximum of 100 credits per subject. The selection must include at least one subject in which Level 4 modules are available.
18. In accordance with the core regulations, candidates are normally permitted to study Level 2 modules up to the value of 30 credits;

19. Candidates entering on or before October 2014 may take no more than 20 credits of language modules offered by the University's Centre for Foreign Language Study which follows on from previously completed modules at an earlier level of study. Candidates entering on or after October 2015 will be unable to take any Centre for Foreign Language Study module at Level 3.

20. Candidates entering on or after October 2015 who wish to take modules from outside the Joint-Honours combinations, shown in the table under paragraph 24, must take a minimum of 40 credits.

Level 4 (Degree)

21. Candidates take modules from at least one and no more than three subjects to a maximum of 120 credits per subject.

22. In accordance with the core regulations, candidates must take 120 credits at Level 4.

23. At least 40 credits must be taken in a Level 4 research project.

Joint Honours

24. Within the Natural Sciences programme certain combinations of modules will be known as Joint Honours degrees. Candidates who follow these combinations of modules will be awarded a specific title for their degree.

25. Candidates who follow an approved Joint Honours degree will be awarded an MSci in A and B within the Natural Sciences programme, where A and B are replaced by the approved subject titles. Normally each subject will have a single subject title.

26. In order to qualify for the degree MSci in A and B within the Natural Sciences programme, candidates in Levels 2, 3 and 4 normally study modules from two subjects. Candidates must select not less than 160 and not more than 200 credits from each of the two subjects during the second, third and fourth levels of the programme.

27. The following MSci Joint Honours degrees are available:

MSci Biology and Chemistry (FGC0)

28. This programme is available at Durham City, in a full-time mode of study.

Level 1 (Certificate)

29. Candidates shall study and be assessed in the following modules:

		Credit value
Genetics	BIOL1171	20
Molecules and Cells	BIOL1281	20
Core Chemistry 1	CHEM1078	30
Practical Chemistry 1A	CHEM1087	10

30. Candidates shall also study and be assessed in 40 credits from List A:

List A:		**Credit value**
EITHER		
(Linear Algebra I **AND**	MATH1071	20
Calculus and Probability I)	MATH1061	20
OR		
(Single Mathematics A **AND**	MATH1561	20
Single Mathematics B)	MATH1571	20
OR		
Mathematical And Experimental Tools Required In Chemistry	CHEM1111	20
20 credits offered from any Board of Studies		20

31. Candidates wishing to study for an accredited degree must study and be assessed in the following modules:

		Credit value
Introduction To Materials Chemistry	CHEM1127	10
Practical Chemistry 1B	CHEM1107	10

Level 2 (Diploma)

32. Candidates shall study and be assessed in the following modules:

		Credit value
Core Chemistry 2	CHEM2012	40

Structure and Reactivity in Organic Chemistry	CHEM2087	10
Practical Chemistry 2 – Organic	CHEM2117	10
Molecular Biology	BIOL2441	20
Biochemistry	BIOL2491	20
Cell Signalling	BIOL2501	20

Level 3 (Degree)

33. Candidates shall study and be assessed in the following modules:

		Credit value
Bioactive Chemistry 3	CHEM3211	20
Advanced Biological Chemistry	CHEM3241	20
Advanced Organic Chemistry	CHEM3117	10
Practical Chemistry 3 – Organic	CHEM3127	10
Biochemistry and Biotechnology	BIOL3601	20
Crops for the Future	BIOL3611	20
Stress and Response to the Environment	BIOL3491	20

Level 4 (Degree)

34. Candidates shall study and be assessed in the following modules:

		Credit value
Workshop	BIOL4111	20
Biochemistry Research Project	BIOL4022	40
Bioactive Chemistry 4	CHEM4211	20
Bioactive Chemistry Research Project	CHEM4272	40

MSci Biology and Physics (FGC0)

35. This programme is available at Durham City, in a full-time mode of study.

Level 1 (Certificate)

36. Candidates shall study and be assessed in the following modules:

		Credit value
Genetics	BIOL1171	20
Molecules and Cells	BIOL1281	20
Foundations of Physics 1	PHYS1122	40

37. Candidates shall also study and be assessed in modules to the value of 40 credits from List B:

List B:		**Credit value**
(Linear Algebra I **AND**	MATH1071	20
Calculus and Probability I)	MATH1061	20
OR (Single Mathematics A **AND**	MATH1561	20
Single Mathematics B)	MATH1571	20

Level 2 (Diploma)

38. Candidates shall study and be assessed in the following modules:

		Credit value
Molecular Biology	BIOL2441	20
Development	BIOL2471	20
Cell Biology	BIOL2481	20
Foundations of Physics 2A	PHYS2581	20
Mathematical Methods in Physics	PHYS2611	20
Discovery Skills in Physics	PHYS1101	20

Level 3 (Degree)

39. Candidates shall study and be assessed in the following modules:

		Credit value
Cell Architecture	BIOL3481	20
Genes and Development	BIOL3521	20
Stem Cells and Tissue Engineering	BIOL3531	20
Laboratory Skills and Electronics 3	PHYS3681	20
Foundations of Physics 3A	PHYS3621	20
Foundations of Physics 2B	PHYS2591	20

Level 4 (Degree)

EITHER

40. Candidates shall study and be assessed in the following modules:

		Credit value
Project	PHYS4213	60
Workshop	BIOL4111	20
Biophysical Research Project (S)	BIOL4071	20
Foundations of Physics 4B	PHYS4261	20

OR

41. Candidates shall study and be assessed in the following modules:

		Credit value
Workshop	BIOL4111	20
Biophysical Research Project (T)	BIOL4063	60
Foundations of Physics 4B	PHYS4261	20
20 credits at Level 4 from those offered by the Department of Physics.		20

MSci Chemistry and Mathematics (FGC0)

42. This programme is available at Durham City, in a full-time mode of study.

Level 1 (Certificate)

43. Candidates shall study and be assessed in the following modules:

		Credit value
Core Chemistry 1	CHEM1078	30
Practical Chemistry 1A	CHEM1087	10
Linear Algebra I	MATH1071	20
Calculus and Probability I	MATH1061	20
Analysis I	MATH1051	20
Problem Solving And Dynamics I	MATH1041	20

Level 2 (Diploma)

44. Candidates shall study and be assessed in the following modules:

		Credit value
Core Chemistry 2	CHEM2012	40
Properties of Molecules	CHEM2097	10
Practical Chemistry 2 – Physical	CHEM2127	10
Complex Analysis II	MATH2011	20
Analysis of Many Variables II	MATH2031	20
Mathematical Physics II	MATH2071	20

Level 3 (Degree)

45. Candidates shall study and be assessed in the following modules:

		Credit value
Chemical Physics 3	CHEM3411	20
Computational Chemical Physics	CHEM3151	20
Molecules and their Interactions	CHEM3137	10
Practical Chemistry 3 – Physical	CHEM3147	10
Special Relativity and Electromagnetism	MATH2657	10
Quantum Mechanics III	MATH3111	20

46. Candidates shall also study and be assessed in 30 credits from those offered by the Department of Mathematical Sciences with at most 10 credits from Level 2 and the remainder at Level 3.

Level 4 (Degree)

EITHER

47. Candidates shall study and be assessed in the following modules:

		Credit value
Chemistry Research Project	CHEM4494	80

48. Candidates shall also study and be assessed in modules to the value of 40 credits from those offered by the Department of Mathematical Sciences:

OR

49. Candidates shall study and be assessed in the following modules:

		Credit value
Chemical Physics 4	CHEM4411	20
Project IV	MATH4072	40

50. Candidates shall also study and be assessed in modules to the value of 20 credits from List C:

List C:		**Credit value**
Advanced Computational Chemical Physics 4	CHEM4471	20

51. Candidates shall also study and be assessed in Level 4 modules to the value of 40 credits from those offered by the Department of Mathematical Sciences:

MSci Chemistry and Physics (FGC0)

52. This programme is available at Durham City, in a full-time mode of study.

Level 1 (Certificate)

53. Candidates shall study and be assessed in the following modules:

		Credit value
Core Chemistry 1	CHEM1078	30
Practical Chemistry 1A	CHEM1087	10
Foundations of Physics 1	PHYS1122	40

54. Candidates shall also study and be assessed in modules to the value of 40 credits from List D:

List D:		**Credit value**
(Linear Algebra I **AND**	MATH1071	20
Calculus and Probability I)	MATH1061	20
OR (Single Mathematics A **AND**	MATH1561	20
Single Mathematics B)	MATH1571	20

Level 2 (Diploma)

55. Candidates shall study and be assessed in the following modules:

		Credit value
Core Chemistry 2	CHEM2012	40
Properties of Molecules	CHEM2097	10
Practical Chemistry 2 – Physical	CHEM2127	10
Foundations of Physics 2A	PHYS2581	20
Mathematical Methods in Physics	PHYS2611	20
Discovery Skills in Physics	PHYS1101	20

Level 3 (Degree)

56. Candidates shall study and be assessed in the following modules:

		Credit value
Chemical Physics 3	CHEM3411	20
Computational Chemical Physics	CHEM3151	20
Molecules and their Interactions	CHEM3137	10
Practical Chemistry 3 – Physical	CHEM3147	10
Foundations of Physics 3A	PHYS3621	20
Foundations of Physics 2B	PHYS2591	20
Laboratory Skills and Electronics 3	PHYS3681	20

Level 4 (Degree)

EITHER

57. Candidates shall study and be assessed in the following modules:

		Credit value
Project	PHYS4213	60

Chemical Physics 4	CHEM4411	20
Foundations Of Physics 4B	PHYS4621	20
Advanced Computational Chemical Physics 4	CHEM4471	20

OR

58. Candidates shall study and be assessed in the following modules:

		Credit value
Chemistry Research Project	CHEM4494	80
Foundations Of Physics 4B	PHYS4621	20

59. Candidates shall also study and be assessed in modules to the value of 20 credits from List E:

List E:		Credit value
Chemical Physics 4	CHEM4411	20
Advanced Computational Chemical Physics 4	CHEM4471	20

MSci Computer Science and Mathematics (FGC0)

60. This programme is available at Durham City, in a full-time mode of study.

Level 1 (Certificate)

61. Candidates shall study and be assessed in the following modules:

		Credit value
Algorithms And Data Structures	COMP1081	20
Computational Thinking	COMP1051	20
Computer Systems	COMP1071	20
Linear Algebra I	MATH1071	20
Calculus and Probability I	MATH1061	20
Analysis I	MATH1051	20

Level 2 (Diploma)

62. Candidates shall study and be assessed in the following modules:

		Credit value
Networks And Systems	COMP2211	20
Software Methodologies	COMP2231	20

63. Candidates shall also study and be assessed in 20 credits of Level 2 modules from those offered by the Department of Computer Science.

64. Candidates shall also study and be assessed in 60 credits of Level 2 modules from those offered by the Department of Mathematical Sciences.

Level 3 (Degree)

65. Candidates shall also study and be assessed in 60 credits of Level 3 modules from those offered by the Department of Computer Science.

66. Candidates shall also study and be assessed in 60 credits of Level 3 modules from those offered by the Department of Mathematical Sciences.

Level 4 (Degree)

67. Candidates shall study and be assessed in modules to the value of 40 or 60 credits from List F:

List F:		Credit value
Advanced Project	COMP4013	60
Mathematics Project	MATH4072	40

68. Candidates shall also study and be assessed in modules to the value of 40 credits of Level 4 from those offered by the Department of Mathematical Sciences.

69. Candidates shall also study and be assessed in modules to the value of 20 or 40 credits of Level 4 modules from those offered by the Department of Computer Science.

MSci Mathematics and Physics (FGC0)

70. This programme is available at Durham City, in a full-time mode of study.

Level 1 (Certificate)

71. Candidates shall study and be assessed in the following modules:

		Credit value
Foundations of Physics 1	PHYS1122	40
Linear Algebra I	MATH1071	20
Calculus and Probability I	MATH1061	20
Analysis I	MATH1051	20

72. Candidates shall also study and be assessed in modules to the value of 20 credits from List G:

List G:		**Credit value**
Problem Solving And Dynamics I	MATH1041	20
Discovery Skills in Physics	PHYS1101	20

Level 2 (Diploma)

73. Candidates shall study and be assessed in the following modules:

		Credit value
Analysis in Many Variables II	MATH2031	20
Complex Analysis II	MATH2011	20
Foundations of Physics 2A	PHYS2581	20

74. Candidates shall also study and be assessed in modules to the value of 20 credits from List H:

List H:		**Credit value**
Foundations of Physics 2B	PHYS2591	20
Discovery Skills in Physics (if not taken previously)	PHYS1101	20

75. Candidates shall also study and be assessed in modules to the value of 20 credits from List I:

List I:		**Credit value**
Mathematical Physics II	MATH2071	20
Theoretical Physics 2	PHYS2631	20

76. Candidates shall also study and be assessed in Level 2 modules to the value of 20 credits **EITHER** from those offered by the Department of Mathematical Sciences if 20 credits of Physics are chosen from List H **OR** from those offered by the Department of Physics if 20 credits of Mathematics are chosen from List I.

77. Discovery Skills in Physics (PHYS1101) must be taken at either Level 1 or Level 2.

Level 3 (Degree)

78. Candidates shall study and be assessed in modules to the value of 60 credits offered by the Department of Physics to include the following modules:

EITHER		**Credit value**
Foundations of Physics 3A	PHYS3621	20
Theoretical Physics 3	PHYS3661	20
Foundations of Physics 3C (if Foundations of Physics 2B was not taken at Level 2)	PHYS3671	20
OR		
Foundations of Physics 3A	PHYS3621	20
Theoretical Physics 3 (if Theoretical Physics 2 was taken at Level 2)	PHYS3661	20
A 20 credit module offered by the Department of Physics (if Foundations of Physics 2B was taken at Level 2)		20
OR		
Foundations of Physics 3A	PHYS3621	20
Foundations of Physics 3C (if Foundations of Physics 2B was not taken at Level 2)	PHYS3671	20
Theoretical Physics 3 (if Theoretical Physics 2 was not taken at Level 2)	PHYS3661	20
OR		
Foundations of Physics 3A	PHYS3621	20

40 credits of modules offered by the Department of Physics (if Foundations of Physics 2B was taken at Level 2 and Theoretical Physics 2 was not taken at Level 2)	40

79. Candidates shall also study and be assessed in modules to the value of 60 credits from List K:

List K1 (2018-2019):		**Credit value**
Numerical Differential Equations III	MATH3081	20
Statistical Mechanics III	MATH3351	20

List K2 (2017-2018):		**Credit value**
Analysis III	MATH3011	20
Continuum Mechanics III	MATH3101	20
Solitons III	MATH3231	20

List K3:		**Credit value**
Differential Geometry III	MATH3021	20
Dynamical Systems III	MATH3091	20
Mathematical Biology III	MATH3171	20
Mathematical Finance III	MATH3301	20
Mathematical Teaching III	MATH3121	20
Operations Research III	MATH3141	20
Partial Differential Equations III	MATH3291	20
Quantum Information III	MATH3391	20
Quantum Mechnics III	MATH3111	20
Topology III	MATH3281	20

Level 4 (Degree)

80. Candidates shall study and be assessed in modules to the value of 40 or 60 credits from List L:

List L:		**Credit value**
Mathematics Project	MATH4072	40
Project	PHYS4213	60

81. Candidates shall also study and be assessed in modules to the value of 40 credits from List M:

List M1 (2018-2019):		**Credit value**
Numerical Differential Equations IV	MATH4221	20
Statistical Mechanics IV	MATH4231	20

List M2 (2017-2018):		**Credit value**
Analysis IV	MATH4201	20
Continuum Mechanics IV	MATH4081	20
Solitons IV	MATH4121	20

List M3:		**Credit value**
Advanced Quantum Theory IV	MATH4061	20
Algebraic Topology IV	MATH4161	20
General Relativity IV	MATH4051	20
Riemannian Geometry IV	MATH4171	20

82. Candidates shall also study and be assessed in modules to the value of 20 or 40 credits from List N:

List N:		**Credit value**
Advanced Condensed Matter Physics	PHYS4151	20
Advanced Theoretical Physics	PHYS4141	20
Particle Theory	PHYS4181	20
Theoretical Astrophysics	PHYS4201	20
Atoms, Lasers and Qubits	PHYS4121	20
Astrophysics 4	PHYS4131	20
Condensed Matter Physics 4	PHYS4111	20
Theoretical Physics 4	PHYS4191	20

Assessment, progression and award

83. Candidates whose achievement at the end of Level 2 does not qualify them to proceed to Level 3 of their Joint Honours degree MSci A and B in Natural Sciences but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of an appropriate programme within the BSc Natural Sciences programme in the Honours or Ordinary stream in accordance with the Core Regulations.

84. A candidate who is qualified to progress from Level 2 to Level 3 of their MSci degree in Natural Sciences may be permitted to transfer to Level 3 of an appropriate degree within the BSc Natural Sciences.

85. Candidates whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 of their MSci degree in Natural Sciences may be awarded an appropriate degree within the BSc Natural Sciences programme with Honours in accordance with the Core Regulations for the award of a Bachelors degree. .

86. Candidates whose achievement at the end of Level 4 does not qualify them to be awarded their MSci degree in Natural Sciences may be awarded an appropriate degree within the BSc Natural Sciences programme with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

87. This programme is not available with an additional year to study abroad at a partner institution; however, this does not exclude the opportunity for an individual student to seek a concession to undertake a replacement year at an overseas institution where an appropriate programme of study can be identified and secured by that student in liaison with the University's International Office and subject to the approval of the Deputy Head of Faculty (Natural Sciences).

Professional accreditation

88. MSci Biology and Chemistry: This programme is accredited by the Royal Society of Chemistry for candidates entering Level 1 up to and including October 2018 as satisfying the academic requirements for the award of Chartered Chemist (CChem) for holders of first or second class honours degrees.

89. MSci Chemistry and Physics: This programme is recognised by the Institute of Physics as a degree with a physics component until February 2019.

90. MSci Chemistry and Physics: This programme is accredited by the Royal Society of Chemistry for candidates entering Level 1 up to and including October 2018 as satisfying the academic requirements for the award of Chartered Chemist (CChem) for holders of first or second class honours degrees subject to a necessary requirement for a candidate to take a final year project in the chemical sciences or at the interface of chemistry and physics.

91. MSci Mathematics and Physics: This programme is recognised by the Institute of Physics as a degree with a physics component until February 2019.