

Description of the new 3rd year of the course

Structure

List of papers and projects:

- B1** – Fluids (no dynamical system, no biophysics)
- B2** – Symmetry and Relativity
- B3** – Atomic and Laser Physics
- B4 core** – Nuclear and Particle Physics
- B5** – General Relativity (no Cosmology)
- B6 core** – Condensed Matter
- B8** – Computational Project (new)
- B9** - Experimental Project (new)
- core** – 6 days practical work
- core** – mini-project to include 4 days lab work plus extended write-up (as in the current course)

(Note that the B7 label is already used in the MPhysPhil course to designate the Classical Mechanics short option.)

- *Each of the B papers have 24h of lectures and 5 tutorials.*
- *Computational and Experimental Projects are equivalent to taught papers in length.*
- *No possibility of replacing 6 days of practical work with an extra short option.*

Requirements:

MPhys: 2 core papers + 3 options

BA: 2 core papers + 1 option + industrial project

MPhysPhil unchanged

OR 2 core papers + 3 options including B8 and/or B9

| | MPhys | | | BA | | |
|-------------------|----------|----------|----------|----------|----------|----------|
| | Option 1 | Option 2 | Option 3 | Option 1 | Option 2 | Option 3 |
| B4+B6 | 2 | 2 | 2 | 2 | 2 | 2 |
| B1,B2,B3,B5 | 3 | 2 | 1 | 1 | 2 | 1 |
| B8, B9 (projects) | | 1 | 2 | 2 | 1 | |
| Indust. Project | | | | | | ✓ |
| Short option | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Practical work | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mini-project | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Total number of hours:

MPhys:

- *120h + 12h lectures (5 B papers + 1 short option) and 25 tutorials*
OR 96h + 12h lectures, 20 tutorials and experimental or computational project
OR 72h + 12h lectures, 15 tutorials and experimental and computational projects
- *6 days practical work + mini project*

BA:

- *72h + 12h lectures (3 B papers + 1 short option), 15 tutorials and BA industrial project*
OR 72h + 12h lectures, 15 tutorials and experimental and computational projects
OR 96h + 12h lectures, 20 tutorials and experimental or computational project
- *6 days practical work + mini project*

Short options: (subject to change)

- S01 Functions of a Complex Variable (years 1 2 3) (12h)
- S04 Energy Studies (years 2 3) (12h)
- S07 Classical Mechanics (years 2 3) (16h)
- S12 Introduction to Biological Physics (years 2 3) (12h)
- S14 History of Physics (years 2 3) (8h)
- S16 Plasma Physics (year 3) (12h)
- S18 Advanced Quantum Mechanics (year 3) (8h)
- S25 Climate Physics (years 2 3) (12h)
- S26 Stars and Galaxies (years 2 3) (12 h)
- S29 Exploring Solar Systems (years 2 3) or Exoplanets (years 2 3) (12 h)

Short options from other departments:

- S20 History of Science (years 2 3) (8h)
- S21 Philosophy of Physics (years 2 3) (16h)
- S22 Language Option (French and, Spanish or German) (years 2 3) (32h)
- S27 Philosophy of Space-Time (years 2 3) (16h)
- S28 Philosophy of Quantum Mechanics (year 3) (16h)

BA exit route is unaffected.