The information provided on this form represents the course structure as taught in the 2021–2022 academic year. While we don’t expect modules on offer to deviate from 2021–22, we do reserve the right to make changes.

(T) = Theoretical options

**CORE**
Everyone takes these:
- Vector Fields, Electricity and Magnetism
- Mechanics and Relativity
- Oscillations and Waves
- Statistics of Measurement and the Summer Project
- Practical Physics: Laboratory, Computing and Problem Solving

**OPTIONS**
Choose ONE:
- Mathematical Analysis (core for Theoretical Physics degrees)
- Advanced Electronics
- Language Course (Year Abroad only)

**CORE**
Everyone takes these:
- Thermal Physics and the Structure of Matter
- Differential Equations and Electromagnetism
- Quantum Physics
- Advanced Practical Physics

**OPTIONS**
Choose THREE (one must be i-Explore)
- Environmental Physics
- Sun, Stars and Planets
- Mathematical Methods (core for Theoretical Physics degrees)
- Communicating Physics
- i-Explore options
YEAR 3

**CORE**

- Everyone takes these:
  - Nuclear and Particle Physics
  - Comprehensives
  - Solid State Physics
  - Third Year Physics Laboratory

**OPTIONS**

Choose at least FOUR:

- Advanced Classical Physics (core for Theoretical Physics degrees)
- Astrophysics (T)
- Computational Physics (T)
- Complexity & Networks (T)
- Foundations of Quantum Mechanics (T)
- Group Theory (T)
- Principles of Instrumentation
- Lasers
- Physics of Medical Imaging and Radiotherapy
- Plasma Physics
- Statistical Mechanics (T)
- Year 3 project
- Essay project

YEAR 4

**CORE**

- Everyone takes these:
  - MSci Research Project
  - Research Interfaces

**OPTIONS**

Choose at least FOUR:

- Advanced Particle Physics (T)
- Hydrodynamics
- Atmospheric Physics
- Cosmology
- General Relativity (T)
- Laser Technology
- Information Theory
- Optical Communications
- Entrepreneurship for physicists
- Concepts in Device Physics
- Quantum Field Theory (T)
- Quantum Information (T)
- Quantum Optics
- Quantum Theory of Matter (T)
- Space Physics
- Unification – the Standard Model (T)
- Introduction to Plasmonics and Metamaterials
Differences between degree programmes

**F390 MSci Physics with Theoretical Physics**

*Year 1:* Mathematical Analysis option is required  
*Year 2:* Mathematical Methods option is required  
*Year 3:* Adv. Classical Phys. required instead of Laboratory III  
*Year 4:* Research Project must be in theoretical physics  
37.5 ECTS over years 3 and 4 must be theoretical options (T)

**F300 BSc Physics**

First 3 years of MSci F303 but project replaces one option in Year 3.

**F325 BSc Physics with Theoretical Physics**

First 3 years of MSci F390 but Theoretical Project replaces one option and two options must be theoretical.

**F309 MSci Physics with a Year Abroad**

*Year 1:* Language course is required unless fluent speaker  
*Year 2:* Language course required (taken as i-Explored choice).  
*Year 3:* Spent at partner university. Includes major project in a research group. Physics lecture courses and exams in host country’s language  
*Year 4:* Courses chosen from Years 3 and 4 of MSci F303 programme

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**Year 2 i-Explore**

**Examples**

- Advanced Creative Writing  
- History of Science, Technology and Industry  
- Technology, Justice and Security  
- Language (8 offered)  
- Science and Humanism  
- Music Technology  
- Philosophy of Mind

**Business School options**

- Entrepreneurship  
- Finance and Financial Management  
- Business Economics  

**Five other business options available**

Business School teaching space at Scale Space