



# **Module Handbook**

**Incoming Students**

**Academic year 2024/2025**

**Part 2**

**Physics**

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## **A: THE DEPARTMENT**

The Department of Physics is based in the Rochester Building and the adjoining Ogden Centre for Fundamental Physics, on the Science campus. This is near the corner of South Road and Stockton Road. It is conveniently located, close to all the newer “Hill” Colleges (Grey, Collingwood, St Mary’s, Trevelyan, Van Mildert, St Aidan’s, Josephine Butler and South College) and within a walking distance from the other colleges. Teaching is mostly via lecture courses, lab sessions and projects, as is typical for physics degrees throughout the world. Durham physics admits around 180 students a year, meaning that some of the classes are quite large; however, Physics students also have activities in smaller groups, e.g., example classes or workshops, and the final year project is supervised in one to one meetings.

### **A1: Exchanges Departmental Coordinator**

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## **B: DEGREE PROGRAMMES OFFERED**

The Department offers the following degrees:

- BSc Physics (3 years)
- MPhys in Physics, Theoretical Physics, or Physics and Astronomy (4 years)

### **B1: Degree Structure**

All degrees at Durham have a modular structure, consisting of the equivalent of six modules (in total, 120 Durham credits, amounting to 60 ECTS) each year. Modules are usually studied over all three terms of the teaching year. All modules are examined or assessed in the year in

which they are taught. At the end of the first year there are preliminary examinations, and the final degree class is determined by the examinations taken in the second, third, and (in the case of the MPhys degrees) fourth year. The modules taken are closely prescribed, and certain extra modules are compulsory for the Theoretical Physics and the Physics and Astronomy options.

## **C: REQUIREMENTS AND RESTRICTIONS**

**This section contains important information for setting up your academic programme at Durham University. Please read through this section carefully before considering your modules and filling in the Learning Agreement!**

### **C1: General**

#### **Choice of Modules**

#### **IMPORTANT NOTE FOR STUDENTS: PLEASE READ BEFORE COMPLETING YOUR LEARNING AGREEMENT**

At Durham University European Exchange agreements are signed by individual university departments and are not university-wide agreements. This means that, in general, students will have to choose modules within the Durham University department through which the agreement with their home university has been signed (students should check with the Exchanges Coordinator in their university if they are not sure which department this is). Modules offered by other departments are subject to availability and can only be taken with prior consent from the relevant department. Certain restrictions may also apply to courses in some departments and students need to follow the advice below carefully before completing their Learning Agreements.

Please clearly indicate the modules you wish to take on your Learning Agreement (included in your application package) for approval by the respective department(s). Before completing your Learning Agreement, it is important that you read carefully the relevant departmental section(s) of the Module Handbook to check which modules are available to you and any restrictions which may apply. It is imperative that a properly

completed Learning Agreement is submitted as part of the application form. Only complete applications can be processed.

Section *D: Module Details* are available in the department's handbook which is updated each academic year. To find out about the details for each module (teaching methods and contact hours, prerequisite academic background, method of assessment, content, etc) please refer to the Faculty Handbook online, under:

<http://www.dur.ac.uk/faculty.handbook/>.

## **C2: Departmental Requirements and Restrictions**

Exchange students should provide information on what they have already studied and been examined on in their home institution, which is as clear and complete as possible. This will streamline the process of deciding whether your module choices are appropriate for your level.

### **D: MODULE DETAILS**

Up-to-date details of modules available for the current academic year are available from the Faculty Handbook online, following the link given above. Some courses included in the handbook may not be available in the coming academic year, if in doubt, please contact the department's Exchanges Coordinator.

### **D1: Modules available to European students coming on a departmental link**

Modules available for exchange students are listed below. (There are very few restrictions, which are usually for logistical reasons.)

#### **YEAR 1**

<b>MODULE CODE</b>	<b>MODULE TITLE</b>	<b>ECTS</b>
PHYS1122	FOUNDATIONS OF PHYSICS 1	20
PHYS1101	DISCOVERY SKILLS IN PHYSICS	10
PHYS1081	INTRODUCTION TO ASTRONOMY	10

## YEAR 2

MODULE CODE	MODULE TITLE	ECTS
PHYS2581	FOUNDATIONS OF PHYSICS 2A	10
PHYS2591	FOUNDATIONS OF PHYSICS 2B	10
PHYS2611	MATHEMATICAL METHODS IN PHYSICS	10
PHYS2621	STARS AND GALAXIES	10
PHYS2631	THEORETICAL PHYSICS 2	10
PHYS2641	LABORATORY SKILLS AND ELECTRONICS *	10
PHYS2651	PHYSICS IN SOCIETY	10

\* Permission to take Laboratory Skills and Electronics must be arranged in advance with the Department Exchange Coordinator.

## YEAR 3

MODULE CODE	MODULE TITLE	ECTS
PHYS3621	FOUNDATIONS OF PHYSICS 3A	10
PHYS3631	FOUNDATIONS OF PHYSICS 3B	10
PHYS3601	ADVANCED LABORATORY*	10
PHYS3591	MATHEMATICS WORKSHOP	10
PHYS3561	COMPUTING PROJECT	10
PHYS3711	CONDENSED MATTER PHYSICS 3	10
PHYS3651	PLANETS AND COSMOLOGY 3	10
PHYS3661	THEORETICAL PHYSICS 3	10
PHYS3581	TEAM PROJECT	10
PHYS3721	MODERN ATOMIC AND OPTICAL PHYSICS 3	10

\* Permission to take advanced Laboratory must be arranged in advance with the Department Exchange Coordinator.

## YEAR 4

MODULE CODE	MODULE TITLE	ECTS
PHYS4213	PROJECT *	30
PHYS4121	ATOMS, LASERS AND QUBITS	10

PHYS4141	ADVANCED THEORETICAL PHYSICS	10
PHYS4151	ADVANCED CONDENSED MATTER PHYSICS	10
PHYS4161	ADVANCED ASTROPHYSICS	10
PHYS4181	PARTICLE THEORY	10
PHYS4201	THEORETICAL ASTROPHYSICS	10

\* Permission to take this module must be arranged in advance with the Department Exchange Coordinator

There may also be the possibility of enrolling in postgraduate courses, including those given within the MSc degree in Particles, Strings and Cosmology

(<https://search.durham.ac.uk/s/search.html?query=%21showall&f.Level%7ClevelName=Postgraduate&f.Tabbed+Facet%7Cdurham-courses=Courses&collection=durham-search>)

Please enquire with the Department Exchange Coordinator if interested.

**D2: Modules available to Exchange students coming on an external link (through a different department)**

Modules open to students coming through a different department are the same as for students coming on a departmental link. However, laboratory, tutorial or project-based modules will generally not be available. Interested students should contact the physics Exchanges Coordinator (f.m.b.dias@durham.ac.uk) for advice.