Physics Applicant Day

Professor Justin Read, Head of Department
Dr Caroline Shenton-Taylor, Admissions Tutor
Congratulations!

Universities and colleges will decide whether to make the applicant an offer. It'll be:

- unconditional if they’ve already met the entry requirements
- conditional if the offer’s based on exam results
The Physics Department

Founded in 1906 when the University was still based in Battersea

36 Academic staff

350-400 Undergraduates
Physics Research Areas

- **Photonics and Quantum Science**
  - Laser beaming solar energy to earth

- **Soft Matter and Polymers**
  - Advanced polymer systems

- **Astrophysics**
  - Modelling galaxy formation

- **Nuclear Physics**
  - Germanium detector array at GSI laboratory

- **Medical Physics**
  - Multi-functional imaging
Our Placement Programmes

Ranked 1\textsuperscript{st} \textit{in the UK} and 7\textsuperscript{th} \textit{in the World} in the 2019 QS Employability Rankings for

\textit{work placements and research partnerships with employers}
Our Placement Programmes

Leading in Graduate Employment

- BSc optional paid 1 year placements
- Unique MPhys Research Year
- Shorter summer placements
- Excellent graduate employment outcomes

Phillips Respironics

Rutherford Appleton Laboratory
Physics
Degree Content

physicsadmissions@surrey.ac.uk
The courses we offer

Physics

Physics with Astronomy

Physics with Nuclear Astrophysics

Physics with Quantum Technology

Mathematics and Physics

BSc  MPhys  MMath
Your Placement Choice

BSc
Year 1 → Year 2 → Year 3
Foundation Year option

MPhys
Year 1 → Year 2 → Year 3 → Year 4
Placement
Research Year
How is it taught?
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Physics</th>
<th>Physics &amp; Maths</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY1033</td>
<td>Fundamentals of Physics</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>PHY1034</td>
<td>Essential Mathematics</td>
<td>✔️</td>
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</tr>
<tr>
<td>PHY1035</td>
<td>Scientific Investigation Skills</td>
<td>✔️</td>
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<tr>
<td>PHY1036</td>
<td>Oscillations and Waves</td>
<td>✔️</td>
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<tr>
<td>PHY1037</td>
<td>The Universe</td>
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<tr>
<td>PHY1038</td>
<td>Mathematical &amp; Computational</td>
<td>✔️</td>
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<tr>
<td>PHY1039</td>
<td>Properties of Matter</td>
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<tr>
<td>PHY1040</td>
<td>Atoms and Quanta</td>
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<tr>
<td>PHY1034</td>
<td>Linear Algebra</td>
<td>✔️</td>
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<td>MAT 1041</td>
<td>Professional Skills</td>
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</table>
Year 2

Electromagnetism, Scalar & Vector Fields
- Energy, Entropy and Numerical Physics
- Quantum Physics
- Solid State Physics
- Electromagnetic Waves
- From Atoms to Laser
- Nuclear and Particle Physics

Light Laboratory

Introduction to Astronomy

Groups and Rings
- Ordinary Differential Equations
- Analytical Mechanics and Modelling
- Operations Research Optimisation
- Numerical and Computational Methods
- Numbers and Sets
- Linear Partial Differential Equations
- Applications of Differential Equations
# A typical 1st year timetable

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>9 am</td>
<td>Lecture</td>
<td>Lecture</td>
<td>Lecture</td>
<td>Lecture</td>
<td>Labs</td>
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<tr>
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<td>Tutorial</td>
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<td>Labs</td>
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<td>1 pm</td>
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<td>Private</td>
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<td>2 pm</td>
<td>Skills</td>
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<td>Study</td>
<td>Lecture</td>
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<tr>
<td>3 pm</td>
<td>Lecture</td>
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<td></td>
<td>or</td>
<td>Tutorial</td>
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<tr>
<td>4 pm</td>
<td>Tutorial</td>
<td>Lecture</td>
<td></td>
<td>Sports</td>
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</tbody>
</table>

Typically ~20 contact hours per week
Physics Placement Opportunities

physicsadmissions@surrey.ac.uk
How do the BSc and MPhys programmes work?

BSc

Year 1 → Year 2 → Year 3

MPhys

Year 1 → Year 2 → Year 3 → Placement → Year 4

Research Year
BSc | Optional Summer Placements
BSc | Optional Professional Training Year

Networking

2300 placement providers

Paid

Reduced fees
Many are paid

Around the world

Networking

Dissertation
Physics Community

physicsadmissions@surrey.ac.uk
Friendly and Inclusive Community

- Welfare Centre
- Wardens
- Secure Campus
- The Hive for Students
- Physoc Society
- Department Talks
- Physics Student Reps.
- Physics Ambassadors
- Personal Tutors
- Peer Teaching
www.surrey.ac.uk/department-physics

Admissions Tutor: physicsadmissions@surrey.ac.uk

Head of Department: physicshod@surrey.ac.uk

University of Surrey

Surrey Offer Holders
(Physics Q&A)