



DEPARTMENT OF PHYSICS

UNDERGRADUATE STUDENT HANDBOOK

2022/2023

Department of Physics

School of Engineering, Physical and Mathematical Sciences

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Disclaimer

This document was published in September 2022 and was correct at that time. The department* reserves the right to modify any statement, if necessary, make variations to the content or methods of delivery of courses of study, to discontinue courses, or merge or combine courses if such actions are reasonably considered to be necessary by the College. Every effort will be made to keep disruption to a minimum, and to give as much notice as possible.

* Please note, the term 'department' is used to refer to 'departments', 'Centres and Schools'. Students on joint or combined degree programmes should check both departmental handbooks.

Contents

1	INTRODUCTION TO YOUR DEPARTMENT	5
1.1	WELCOME	5
1.2	HOW TO FIND US: THE DEPARTMENT	5
1.3	HOW TO FIND US: THE STAFF	5
1.4	HOW TO FIND US: THE SCHOOL OFFICE.....	5
1.5	MAP OF THE EGHAM CAMPUS.....	5
2	SUPPORT AND ADVICE	6
2.1	SUPPORT WITHIN THE DEPARTMENT	6
2.1.1	Personal Tutors / Tutors.....	6
2.1.2	References.....	6
2.1.3	The Senior Tutor.....	6
2.1.4	Year Tutors.....	6
2.1.5	Programme Director.....	6
2.2	SUPPORT WITHIN YOUR SCHOOL	7
2.3	DISABILITY & NEURODIVERSITY TEAM (D&N)	7
3	DEPARTMENT CODES OF PRACTICE	7
4	COMMUNICATION	7
4.1	YOUR CONTACT INFORMATION	7
4.2	COMMUNICATION DURING YOUR STUDIES	7
5	TEACHING.....	8
5.1	TEACHING DATES.....	8
5.2	STUDY WEEKS	8
5.3	HOW YOU WILL SPEND YOUR TIME	8
5.4	LECTURES.....	8
5.5	AFTER EXAMINATION COMMITMENTS	8
5.6	PROBLEM SHEETS AND PROBLEM CLASSES	9
5.7	LABORATORIES.....	9
5.8	TUTORIALS	9
5.9	SELF-STUDY	10
5.9.1	Group Study	10
5.9.2	Reading	10
5.9.3	The Web/ Moodle	10
5.10	SKILLS TRAINING	11
5.11	REVIEWS, REPORTS AND PROJECTS.....	11
5.12	THE PHYSICS CURRICULUM.....	11
5.13	QUALITY ASSURANCE	11
5.14	WHAT WE EXPECT OF YOU	11
6	DEGREE STRUCTURE	12
6.1	CHANGE OF DEGREE COURSE.....	12
6.2	MODULE REGISTRATIONS.....	12
6.3	CHANGE OF MODULE	12
6.3.1	Choice of module units	12
6.3.2	Change of module unit registration.....	12
6.4	UNDERGRADUATE DEGREE COURSES	13
6.4.1	The BSc single honours degree courses	13
6.4.2	The MSci degree courses	13
6.4.3	BSc degree courses with Physics as a major subject	13
6.4.4	Joint honours degree courses.....	13
6.4.5	MSci and BSc degrees courses	14
6.5	THE PHYSICS ESSENTIAL CORE.....	15
6.6	STUDY ABROAD AND EXCHANGES	15
7	ASSESSMENT INFORMATION	16
7.1	ANONYMOUS MARKING.....	16

7.2	SUBMISSION OF WORK	16
7.3	CALCULATORS.....	16
7.4	PROGRESSION AND AWARD REQUIREMENTS	16
7.5	MANDATORY (NON CONDONABLE FAIL) MODULES	16
7.6	DEGREE CLASSIFICATIONS	16
7.7	ASSESSMENT IN BSc AND MSci YEARS 1–3	17
7.8	ASSESSMENT IN THE MSci YEAR 4.....	17
7.9	MARKING SCHEME	18
7.10	PROGRESSION REQUIREMENTS	19
7.11	WHAT TO DO IF THINGS GO WRONG – EXTENSIONS TO DEADLINES	20
7.12	SUMMER RESITS	20
7.13	SUPPORT AND EXAM ACCESS ARRANGEMENTS FOR STUDENTS REQUIRING SUPPORT.....	20
7.14	ACADEMIC MISCONDUCT	21
7.15	PRIZES	21
8	ENGAGEMENT REQUIREMENTS.....	21
9	CAREERS INFORMATION (DEPARTMENT SPECIFIC)	21
10	HEALTH AND SAFETY INFORMATION	22
10.1	THE DEPARTMENT: PRACTICAL INFORMATION.....	22
10.2	CODE OF PRACTICE ON HARASSMENT FOR STUDENTS	22
10.3	LONE WORKING POLICY AND PROCEDURES	23
10.4	USING COMPUTERS	23
11	FACILITIES.....	23
11.1	FACILITIES AND RESOURCES WITHIN YOUR DEPARTMENT.....	23
11.1.1	Telescopes.....	23
11.1.2	Mathematica	23
11.1.3	Special lectures.....	23
11.1.4	Colloquia	24
11.1.5	Physics Society	24
11.1.6	Institute of Physics.....	24
11.1.7	Summer Internships	24
11.2	THE LIBRARY	24
11.2.1	Physics Resources Room (T118)	24
12	MAP OF THE EGHAM CAMPUS.....	25

1 Introduction to your department

1.1 Welcome

Welcome to Royal Holloway. Royal Holloway, University of London (hereafter 'the College') is one of the UK's leading research-intensive universities, with six academic schools spanning the arts and humanities, social sciences and sciences.

Welcome to the Department of Physics. This Handbook contains important information specific to undergraduate students registered for Physics degree programmes and modules. Additional information relating to all RHUL Programmes can be found [here](#) in the College Undergraduate Student handbook. Both Handbooks should be read very carefully and referred to regularly. You will find an electronic copy of the Department Student handbook (this handbook) on the [Physics UG Departmental Moodle page](#), where there is also detailed information about the teaching programmes, modules, and people within the Physics Department. The Department complies with the College Regulations, Student Charter and Codes of Practice. The Codes of Practice cover Academic Welfare, Freedom of Speech, Student Union Affairs, Personal Harassment, and Health and Safety. No interpretation of the information presented here should conflict with these regulations or a Code of Practice. In the case of any apparent difference, the College regulations will prevail.

1.2 How to find us: the Department

The Department of Physics is housed in the Tolansky Building and Wilson Laboratories. Most of the academic, research and technical staff are based here. The first number of the room code denotes the floor level, 0, 1, or 2. The Tolansky teaching laboratory (T231) and Physics Resources Room (T118) are the locations within Physics that you will use most, but most of your lectures will be in other buildings on campus.

1.3 How to find us: the staff

CONTACT DETAILS

Executive Dean:	Professor Gavin Shaddick Gavin.Shaddick@rhul.ac.uk	01784 446881	Bedford 1-27
Head of Department:	Professor Stephen Gibson Stephen.Gibson@rhul.ac.uk	01784 44 3454	Wilson Laboratory 255
Director of Undergraduate Studies:	Dr Philipp Niklowitz philipp.niklowitz@rhul.ac.uk	01784 44 3499	Wilson Laboratory 152
Deputy Director of Undergraduate Studies:	Dr Asher Kaboth asher.kaboth@rhul.ac.uk	01784 44 3505	Wilson Laboratory 252
School Manager:	Vanessa Law Vanessa.Law@rhul.ac.uk	01784 443598	Bedford 1-28
Help desk:	EPMS-School@rhul.ac.uk	01784 276881	Bedford 1-29
Disability & Neuro Diversity Team Network Member:	Stuart Hollister EPMS-School@rhul.ac.uk	01784 276881	Bedford 1-29

1.4 How to find us: the School office

The school office is located in Bedford Building 1-29. The School Office is open from 10:00am to 16:00pm, Monday to Friday. You can also phone the Help Desk on 01784 276881, or you can email EPMS-School@rhul.ac.uk.

1.5 Map of the Egham campus

A Campus map is available on the final page of the Handbook.

2 Support and advice

2.1 Support within the Department

We aim to run a friendly and helpful department. All members of staff are more than willing to provide advice and support for both academic and other problems. The department operates an 'open door' policy, meaning that students can knock on the door of a member of staff at any time to ask for help. Frequently you will be able to talk immediately, otherwise you should arrange a time for a meeting. If the staff member is away for a few days, you may find a note on the door to that effect and you should send an email to arrange an appointment. If you feel that you need to see someone immediately and you are not sure who can help, please ask in the School Office for the name of the person best placed to advise you.

In general, the first person to approach, if you have a specific problem with material in a module, is the person teaching the module. First and second year students should also consult their tutors. For other problems you might approach your Personal Tutor, the Senior Tutor or seek help from wider sources.

2.1.1 Personal Tutors / Tutors

During the first week in the Department, you will be allocated a member of the academic staff who will act as their Personal Tutor, normally throughout their degree course. The role of the Tutor is to guide your academic progress throughout your time here; they are responsible for overseeing your academic welfare. Please talk to your tutor as soon as possible, if you have any academic, financial, medical, or other problems that might affect your studies: they may be able to suggest an appropriate course of action or point you towards another source of help; they can also act on your behalf in some circumstances. Any personal information will be treated with discretion.

Note: You should see your Personal Tutor at least at the beginning and end of each term (even if everything is going well). Your tutor will review and plan your study with you, as well as complete any routine administration that is needed.

2.1.2 References

You are welcome to approach a member of staff, ideally your Personal Tutor or your Project Supervisor, for a reference for a job or further studies and you should do this before you include their name in your application and in plenty of time before the submission deadline. In your request you should include a copy of your CV and clearly indicate the deadline for submission of the reference.

2.1.3 The Senior Tutor

The Senior Tutor [Prof Pedro Teixeira-Dias](#).

- co-ordinates all pastoral support in the department,
- has overall responsibility for checking that undergraduates are following their programmes satisfactorily, and
- may give verbal and/or written warnings to any student whose progress or attendance is not satisfactory.

If you wish to discuss personal circumstances that are affecting your studies, please talk to the Senior Tutor at the earliest possible opportunity

2.1.4 Year Tutors

Each year has a designated Year Tutor. The Year Tutor is responsible for monitoring your progress in the appropriate year.

1st year: [Prof Veronique Boisvert](#)

2nd year: [Prof Glen Cowan](#)

3rd year: [Dr Andrew Ho](#)

4th year: [Dr Andrew Casey](#)

2.1.5 Programme Director

The Programme Director, [Dr Philipp Niklowitz](#), along with your Personal Tutor can help you make your selection of module units each year and advise on changes of degree programme.

2.2 Support within your School

The School Helpdesk is there to help you with any questions or concerns you might have about your studies. Opening hours are 10:00am to 16:00pm Monday to Friday. The Helpdesk is staffed throughout these opening hours.

You can ring 01784 276881 during office hours or email EPMS-School@rhul.ac.uk. Depending on your query, the Helpdesk will answer your questions, book you an appointment, put you in touch with a colleague who can help, or refer you another professional team within the College. The Helpdesk is situated in room 1-29, in Bedford Building.

2.3 Disability & Neurodiversity Team (D&N)

If you have a disability, long standing medical condition or specific learning difficulty, it is important that you bring it to the College's attention as soon as possible.

Your first point of contact for advice and guidance in the Department is [Prof Pedro Teixeira-Dias](#).

3 Department codes of practice

Royal Holloway lays down firm codes of practice for its staff and students on the Academic Welfare of Students, on Freedom of Speech, on Sexual and Racial Harassment, and on Safety, Security and Parking. You will find these codes of practice in the [College Regulations and Procedures](#)

If you feel you are the victim of an infringement of any of these codes, or of any legal right, take the matter up with any of the following, as you see fit:

- your Personal Tutor;
- the Senior Tutor;
- your Year Tutor;
- the Head of Department;
- any other member of department teaching staff you prefer to deal with;
- the Support Advisory and Wellbeing Services (tel. 3394);
- the Student Counselling Service (tel. 3128);
- any Students' Union officer.

4 Communication

4.1 Your Contact Information

There can be occasions when the department needs to contact you urgently by telephone or send you a letter by post.

It is your responsibility to ensure that your telephone number (mobile and landline) and postal address (term-time and forwarding) are kept up to date. Further information about maintaining your contact information is available [here](#).

You can find out about how the College processes your personal data by reading the [Student Data Collection notice](#)

4.2 Communication during your studies

The most important way to contact academic staff and receive important communications is by email. You should therefore check your College email regularly (at least daily). Do not ignore emails from us. We will assume you have received an email within 48 hours, excluding Saturdays and Sundays.

It is vitally important that you keep in touch with us, and we keep in touch with you. Members of staff will often need to be able to contact you to inform you about changes to teaching arrangements, special preparations you may have to do for a class or meetings you might be required to attend. You will need to be able to contact members of the department for example, if you are unable to attend a class, or wish to arrange a meeting with a tutor or your Personal Tutor.

You may also approach academic staff after a lecture or go to their office.

5 Teaching

5.1 Teaching Dates

Term dates are found [here](#)

5.2 Study weeks

There are no study weeks in Physics.

5.3 How you will spend your time

Learning is a skill that is personal; you will learn better in some ways than others and your aptitudes may be different to those of your fellow undergraduates. We provide a range of teaching techniques, both for variety and to cater for the variation in student aptitudes and preferences. Some of our teaching is based on the traditional approach of lectures, laboratories and problem-solving sessions. Others utilise a more student-centred approach including blended or flipped learning that puts more emphasis on self-study.

Guidance on the time you should spend on the various activities associated with each module can be found in the module specifications.

5.4 Lectures

Lectures define your learning agenda for many modules. Your aim should be to understand the material as it is being presented, or shortly thereafter, and to distil it into a set of coherent notes that will be intelligible months or years later. At first this can be quite challenging. Ideally you will read and annotate the notes shortly after the lecture, clarifying any points you are uncertain about with the aid of a textbook. Keep your lecture notes carefully filed, together with all the relevant handouts, problem sheets *etc.* This body of work is essential for future reference and revision.

If you miss a lecture, for whatever reason, use the available online learning material at the earliest opportunity, make sure you understand it fully and, if necessary, ask the lecturer about any points you can't follow. For many modules a reference copy of the lecturer's notes and other source material is available via Moodle. You may ask to copy lecture notes from an undergraduate colleague.

You should not record lectures without permission. If you do obtain permission to record a lecture, the recording must be used for your own personal study; you should not reproduce it or pass it on to anyone else.

5.5 After examination commitments

After the examinations, in the Summer there are skills modules for 1st and 2nd year undergraduates, and for 3rd years continuing onto the MSci:

- First years will make a start on the second-year lab module, PH2150 Scientific Computing Skills. They will be learning and practising Python programming; there are compulsory lab sessions in the after-exam period, and the coursework covered in the summer session will contribute 20% to the final mark of PH2150.
- Second years have a Presentation Skills and Report Writing module and employer engagement sessions and the marks will contribute 10% to the final mark of PH3010 Advanced Skills.
- Third year MSci students are expected to start work on their PH4110 Research Review.

5.6 Problem sheets and problem classes

In lectures, problem sheets will be distributed at regular intervals. The aim of these is to give you the opportunity to apply the ideas discussed in the lectures. You are expected to attempt the questions and submit them by the deadline in Moodle.

The departmental target is that marked work will be available within about two weeks. Feedback on common difficulties will be given in a class session.

In some modules, Problem Classes provide a forum for attempting problem sheets with academic staff or postgraduate students present and available to help. Their aim is not to show you how to do the problem, but to ensure you understand the principles and the approach so that you may do them yourself.

The marks from problem sheets normally contribute to the final mark for the module. This means that, while it is useful to discuss the problems with colleagues, the final version you hand in must be your own work.

Make sure that your work is clearly marked with the module code (*e.g.* PH1110), and the problem sheet number. Don't write your name or student number on your solutions if not instructed otherwise to enable anonymous marking.

5.7 Laboratories

Experimental work is a vital part of physics. Laboratory sessions are designed to introduce you to experimental techniques, to give you experience in using complex equipment, to investigate phenomena new to you, to test theoretical models, to demonstrate first hand some of the most famous and important experiments and phenomena of Physics, and to allow you to develop the skills necessary to justify your interpretation of experimental results.

You will be supervised by academic staff and postgraduate students studying for Doctorates and aided by technical staff.

Most laboratory sessions are held in the Tolansky Teaching Laboratory (T231). You are expected to attend for the full session apart from short breaks.

5.8 Tutorials

All first and second year students have regular 'small-group' tutorials, typically comprising four or five students together with a member of staff. Usually, one hour per week is scheduled. Tutorials offer the opportunity to discuss any aspect of physics in an informal, friendly atmosphere. They provide you with direct access to a member of staff and are the principal forum through which you can get help with any difficulties you may be having in understanding Physics.

In certain lecture modules in the first and second years, module leaders have prepared tutorial question sheets. These sheets are in addition to normal coursework, and you should attempt the questions so that meaningful discussions about the relevant physics can take place in tutorials. Submit the written answers to your Tutor via Moodle.

General matters involving the department may also be discussed.

The principal purposes of tutorials are to broaden your approach to physics and to help you increase your personal confidence.

Note that your active participation in tutorials will determine the 'quiz' marks in first and second year modules.

5.9 Self-Study

Time spent in contact with members of staff, (lectures, tutorial, laboratories, *etc.*) is only the starting point; this needs to be supplemented by further study in your own time.

It is important that you do enough further study (reading, working on problems, comprehension, revision of lecture notes, *etc.*) to understand the material covered as the modules progress. You should also allocate sufficient time to complete assignments (such as problem sheets) in an organised, appropriate and considered fashion.

The vacation periods after the Autumn and Spring terms should be used to review your progress and, especially before the Summer term, for examination revision. You are responsible for managing your own time in an effective way and there are a variety of methods:

5.9.1 Group Study

Group study is an excellent way to learn. Often discussions amongst students highlight areas of misunderstanding or missing concepts in a congenial environment that can be dealt with there and then, or later be brought to the attention of a lecturer.

Group study is also beneficial in promoting enthusiasm and awareness of the subject. The department fully endorses group study but **remember that work submitted for assessment must be your own.**

5.9.2 Reading

It is essential that you read widely. The process enhances your understanding and broadens your knowledge of science.

Buying textbooks is an expensive commitment and it may not be possible for you to purchase the recommended book(s) for every module you take, but you can borrow the books from the library.

First Year Mathematics and Physics books are available from the library and as e-books.

For first year students A-level notes and textbooks can also prove invaluable for reference.

More advanced students should think carefully about making best use of money and choosing books most appropriate to their style of learning. Books should be perused carefully before purchasing. Various other cost saving strategies can be employed:

- arrange with a friend to buy different books for sharing;
- look around for second-hand copies (but be aware that old editions may have different content);
- sell books that you no longer need;
- borrow a library copy.

One of the functions of the library is to hold copies of relevant undergraduate books. Usually, they may be borrowed but some important books are held in the library for reference. The library caters for most needs, but if you find that improvements could be made to book stocks or in other ways do not hesitate to contact them or the department Library Representative, who will pass your suggestions on. While not a library, copies of important course texts are also held in the Physics Resources Room (T118) for your convenience, the same comments about reasonable use apply.

The Librarian responsible for Physics is Eva Garcia-Grau, and the Physics Library Representative is named in the [Members of Staff and their Areas of Responsibility](#) document on the [Department Moodle page](#). Members of staff also welcome your comments about books, or recommendations for new or extra library books related to their courses.

5.9.3 The Web/ Moodle

All modules are represented on the virtual learning environment Moodle and the ones for which you are registered should be available to you. Any questions about the Moodle page content should be directed to the module leader.

The content of each module Moodle page is determined by the module leader; typically copies of problem sheets, past examination papers, selected model solutions, a chat room and other learning materials are available, typically organised in weekly blocks.

A particularly important folder on Moodle is [2022-23 Physics Departmental Page](#). It contains all the information that is not specific to the individual physics modules. You should make yourself familiar with the contents of this page.

We recommend the use of the web for researching specific concepts or information. In particular, the Royal Holloway Library, the National Standards Laboratories, Hyperphysics, Wolfram and other sites can be very helpful. A number of links can be found from the Moodle pages.

However, the web is not a fully reliable source of information, and we warn you to exercise very careful judgement before believing what you read. We note that plagiarism of web-based content is easily detected; this is a serious offence.

The research pages of the department are also helpful and interesting. They allow you to learn about some of the activities of members of academic staff in their research roles.

5.10 Skills Training

The acquisition of 'transferable skills' is a very important part of your course. As well as the traditional mathematical and experimental skills expected of all physicists, the modern world also expects you to be computer literate, able to find accurate information from a variety of sources, and to present your work in the form of written reports, posters, and talks. All degree programmes have modules to help you develop these skills.

5.11 Reviews, Reports and Projects

You will be assigned a supervisor who will oversee your review or project work. If for some reason the supervisory relationship does not work and breaks down, you should speak with the module leader or your Personal Tutor as soon as possible.

5.12 The Physics Curriculum

The undergraduate curriculum is designed around the University of London course unit system to provide flexibility, progression, and choice to each student. The current curriculum for both the BSc and the MSci courses also conforms to the latest recommendations by the Institute of Physics.

The department responds in its arrangements both to results of the quality assurance procedures described in the next section and to external changes and the comments of students and staff.

5.13 Quality Assurance

All of the Physics degree courses have been accredited by the Institute of Physics as leading to Associate Membership of the Institute on graduation and to Chartered Physicist designation (MInstP, CPhys) after an appropriate period of supervised employment as a physicist.

5.14 What we expect of you

The department is committed to the provision of effective teaching, but the initiative for study and progression rests with the student.

We expect you to:

- attend all lectures, tutorials, teaching laboratory sessions, problem classes and other points of contact with academic staff;
- spend sufficient time on self-study;
- submit completed assessed work in advance of deadlines;
- behave in such a way that others around you can learn effectively; and
- fulfil the administrative requirements of your degree course.

We intend that the department and the College be a friendly and supportive place in which to study. You should find your degree course intentionally challenging, and we hope that you will respond positively and rise to meet the challenge. As well as the study of Physics, the degree courses are also designed to allow you to develop qualities such as self-reliance and initiative, the capacity to think rationally and independently, to apply scientific principles to new problems, to work in a team and to write clear reports against a deadline.

It is important to understand the process of learning and to understand how to optimise your own approach. The following book suggestions (copies of which are available in the Physics Resource Room and the library) may help in this.

Sciences Good Study Guide, A Northedge *et al*, Open University, 1997 (507 SCI);

Studying for Science, B White, Spon, 1991 (507 WHI);

Studying successfully, R Baxter, Aldborough St John, 1995 (378.170281 BAX);

How to study: a student's guide to effective learning, A Howe, Kogan Page, 1986 (378.172812 HOW);

The Study Skills Handbook, Stella Cottrell, Macmillan, 2003 (378.1702812 COT).

In addition, you will find additional information on the study resources available on campus at: [skills-gateway.aspx](#)

The Code of Conduct for Student Behaviour can be found on [the Department Moodle page](#).

6 Degree structure

Your degree course determines which modules you can take at any given stage. Please see the Course pathways and Module specifications available on the [Department's UG Moodle page](#) Definitive Course specific information is also held in the [Degree Course Library](#) and module specifications are available from the [Module Catalogue](#).

All degree courses include one of the mandatory non-condonable first year modules SS1001 'Academic Integrity' or SS1000 'Academic Writing Skills' which will help you to avoid academic misconduct.

6.1 Change of Degree Course

If you wish to change your degree course you should initially consult your Personal Tutor, the Senior Tutor, or the Director of Undergraduate Studies, then follow the instructions contained within the College Undergraduate Handbook found [here](#).

6.2 Module Registrations

You can only register for 120 credits' worth of modules in each academic year (this excludes modules which are being re-sat). You will have the option of changing modules up to the end of the second weeks after the start of teaching (excluding Welcome Week), subject to timetabling. Any modules that you wish to take on an extracurricular basis (that is, not counting towards your degree) must be identified at the start of the academic year.

Degree awards cannot be made, and progression to the next level of study cannot occur unless the correct number of module units have been registered and passed.

Students must ensure that they are registered for the correct number of module units.

6.3 Change of Module

You are only permitted to change modules up to a maximum of three weeks after the start of teaching (excluding Welcome Week) with the following exceptions:

- If the change is only in degree pathway title, which does not affect the module units taken and you are still taking the correct module units (worth 120 credits in total) as detailed in the relevant programme specification;
- If the change does affect the module units taken and you have to pick up an extra half unit in the Spring term, but you would be taking the correct module units as detailed in the relevant module specification and would have no less than 120 credits.

6.3.1 Choice of module units

The degree courses (*e.g.* F303 MSci Physics) are composed of individual modules (*e.g.* PH1320 Classical Mechanics), some of which are mandatory, and some of which are optional. Guidance on the selection of optional modules should be taken in consultation with your Personal Tutor or UG Education Lead.

Information of available options for Year 3 and Year 4 will be made available by Summer Term on the Physics Departmental page on Moodle and preliminary registration will need to be done by the end of Summer Term for the coming academic year.

6.3.2 Change of module unit registration

Students thinking of changing any element of their module unit registration after the registration documents have been submitted should seek advice from their Personal Tutor. Those deciding to make such a change must complete an Amendment to Course Unit Registration form, available from the EPMS office. This form must be signed by the Director of Undergraduate Studies. Once you have submitted assessment for a module, you may not replace it with another either in that term or in a subsequent term (*e.g.* Spring term).

The department deadline for changes to Autumn Term and module units taken over the full academic year is two weeks after the start of teaching (excluding Welcome Week).

The College deadline for changes to Spring Term module units is two weeks after the start of teaching to allow time for module registration checking for central examination purposes.

If you are experiencing difficulties, *e.g.* personal, health in returning on time, you should contact your Personal Tutor or the Director of Undergraduate Studies who may advise you to defer or interrupt until the next academic year.

6.4 Undergraduate degree courses

The department offers a number of courses for both three year BSc and four year MSci degrees. The Course Specifications for both MSci and BSc programmes are detailed [here](#).

6.4.1 The BSc single honours degree courses

The BSc degree courses listed below have the traditional three year structure. They prepare you for a scientific career or a career in many other fields of employment.

The BSc degree courses are:

- Physics*
- Theoretical Physics*
- Astrophysics*
- Physics with Particle Physics*

6.4.2 The MSci degree courses

The MSci is a four year undergraduate degree course. It gives a more complete education and training in greater depth. The final year has a strong emphasis on training for research through a major project and a research review. A wide range of modules are available in the fourth year from across the University of London. Many of these are at the frontiers of physics, given by leaders in the specific areas.

The MSci degree courses are:

- Physics*
- Theoretical Physics*
- Astrophysics*
- Physics with Particle Physics*

6.4.3 BSc degree courses with Physics as a major subject

Degree courses are available in which a second discipline is studied as a minor subject. Three modules out of the total of 12 are in that subject.

The degree courses are:

- Physics with Music*
- Physics with Philosophy*

6.4.4 Joint honours degree courses

The department offers two joint honours courses in conjunction with the Department of Mathematics – BSc and MSci Mathematics and Physics. The general aims and objectives of the Department of Physics apply to these courses although the level reached in Physics will be reduced as a consequence of the breadth resulting from the study of the additional subject.

6.4.5 MSci and BSc degrees courses

The Department of Physics offers both three year BSc and four year MSci degrees. In the first two years BSc and MSci students on a particular course follow the same modules. The courses diverge in the third year. It is important that you make the choice between the BSc and MSci courses as soon as possible and before you start the third year to ensure that you obtain the full benefit from your degree course.

A BSc degree course provides a high quality physics education that will stand you in good stead for physics-based occupations and at the same time it provides many intellectual and key skills that will be invaluable in careers where your physics training is not the primary concern.

An understanding of how the world works, the ability to apply the scientific method to problems and other basic abilities of physics graduates, such as numeracy, are all highly valued assets in the wider world.

The MSci is designed for those who want, in addition, to get to the forefront of current understanding either for the intellectual challenge that it brings or because they are keen to pursue a career in physics or a closely related subject where the entry qualifications demand study at the highest level. It brings physics degrees into line with the highest European standards, so that those planning to work abroad or with international companies as a professional physicist should find the MSci degree enables you to compete successfully with applicants from Europe.

From the beginning of the third year the BSc and MSci courses diverge when BSc students study for their BSc project.

The final year of the MSci is taught on a University-wide basis by Royal Holloway, in conjunction with King's, Queen Mary and University Colleges. It comprises a one-unit Major Project and a half unit Research Review, both normally based at Royal Holloway, and a set of modules held mainly in central London. At these modules you will meet and interact with MSci students from the other Colleges in the consortium. A Student Railcard should be purchased and travelling expenses from Egham to the other Colleges will be reimbursed. Some Royal Holloway modules are taught in Egham and delivered by video conference link to the other Colleges. The modules, delivered often by leading experts in the field, cover a broad range and can be selected to match your talents and interests (see the MSci Handbook for information on the modules currently on offer).

The College sets conditions for entry to the third and fourth years of the MSci courses, see [Undergraduate Regulations](#). Think about your choice and discuss it with your Personal Tutor, who will be able to take your individual circumstances into account.

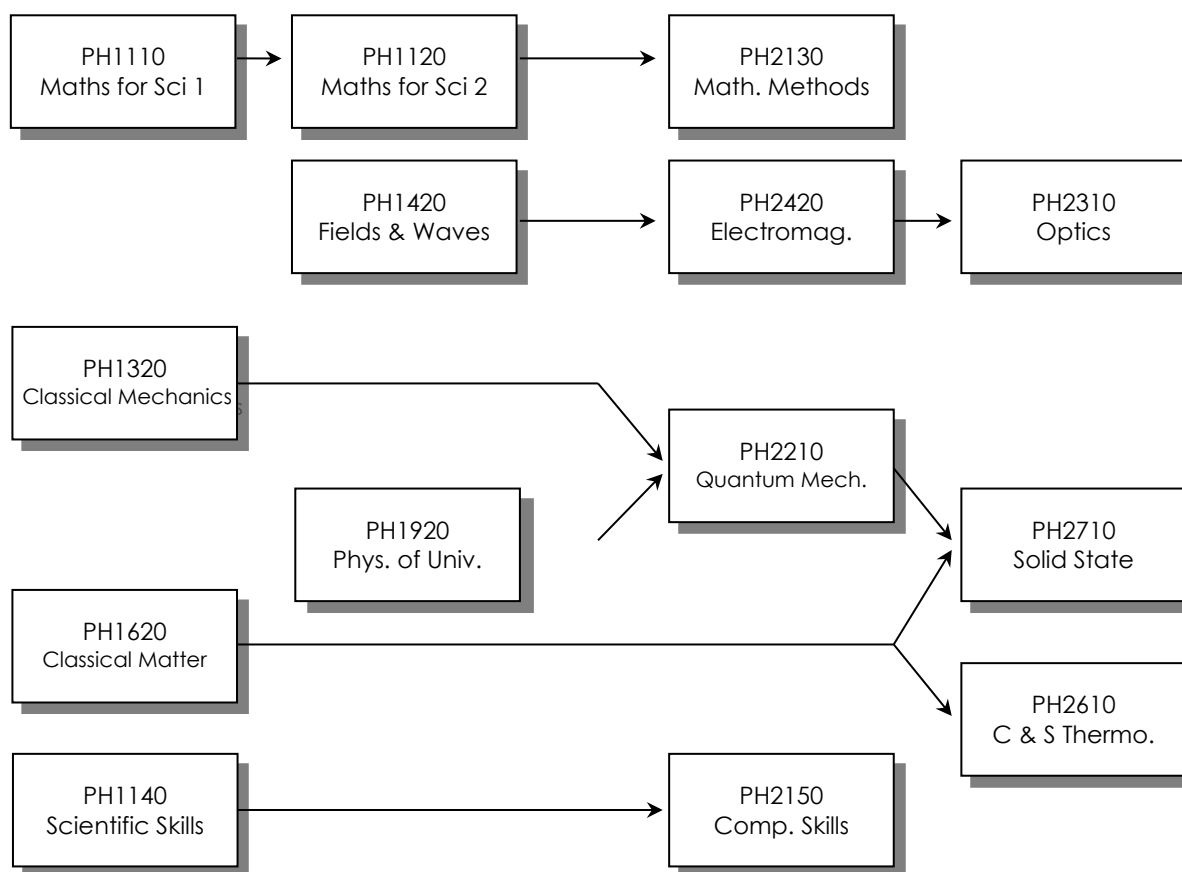
6.5 The Physics Essential Core

Degree courses in the department are built around an essential core of material that gives you a quantitative and a qualitative understanding of the important areas of physics. This core is compatible with the Institute of Physics requirements for the Institute's accreditation of courses and for graduate membership of the Institute.

All students graduating from the department must have encountered:

- dynamics to the level of the special theory of relativity;
- quantum mechanics to the level of Schrodinger's equation and its solutions;
- the physics of condensed matter to the level of understanding the properties of matter in terms of models of behaviour on the atomic scale;
- oscillations and waves as they appear in so many diverse areas of physics – their common mathematical description and an appreciation of their ubiquity;
- electromagnetism to the level of Maxwell's equations and the occurrence of electromagnetic waves;
- optics and optical systems;
- thermodynamics and statistical physics, including the laws of thermodynamics and the application of probabilistic methods to describing and understanding the behaviour of large numbers of particles;
- appropriate mathematical skills required for an understanding of the above;
- skills, including laboratory, computing and communication skills.

Applications of the core material are an essential feature of all courses. The different courses apply and extend the core and introduce specialist topics.



The Physics essential core

6.6 Study Abroad and Exchanges

The Study Abroad Programme (taken as an integral year) is only available to students in the four-year degree programmes during their third year of study. If you are interested, please discuss options with the departmental Study Abroad and Exchanges director, [Prof Glen Cowan](#).

7 Assessment Information

7.1 Anonymous marking

Anonymous marking is used for examinations and for some pieces of work throughout the year. Each student is issued with a candidate number for this purpose. This number is independent of your student number and should not be confused with it.

7.2 Submission of work

Problem sheets and other work to be assessed must be submitted via Moodle by the deadline.

Make sure that your work is clearly marked with the module code (e.g. PH1110) and the problem sheet number and, if not otherwise instructed, don't write your name or student number on your work to enable anonymous marking.

Tutorial work should be submitted via Moodle.

Project reports should be submitted, as instructed, by Turnitin.

7.3 Calculators

The approved calculator for examinations in Physics is Casio FX-83GT X. You will need to take your own Casio FX-83GT X calculator into any formal examinations, and it must have a PH sticker on it – issued from the EPMS Helpdesk. If you are sitting an examination set by another department, e.g. MT3280 or GL3510, make sure your calculator is approved by the home department, i.e. Mathematics or Earth Sciences and has the appropriate sticker e.g. MT or GL.

It is your responsibility to make sure you have a properly labelled calculator.

7.4 Progression and Award requirements

The Regulations governing progression and award requirements are set out in your Course Specification [Degree Course Library](#) (and also more generally in the [Undergraduate Regulations](#)).

The full Undergraduate Regulations for students to progress to the next year of their programme are found [here](#).

If you are taking a degree course that is not wholly within the Physics Department (i.e. some modules are taught by another Academic Department) then you must also read their Departmental Student Handbook to understand their Course and Module requirements.

If you are an MSci student in your second or third year and your average mark is below a certain threshold, you will be transferred to the corresponding BSc programme

7.5 Mandatory (non condonable fail) modules

The mandatory (non-condonable fail) modules are PH1110 and PH1120 for all courses and PH2130, PH2210 and PH4100 for all MSci courses.

7.6 Degree Classifications

At the end of the third year all students (on both BSc and MSci courses) are assigned a BSc degree class calculated from their first, second and third year marks, with the 0:1:2 weighting.

The final formula mark for an MSci degree is a weighted average over the four years of study with weighting 0:1:2:2 of the marks for years one, two, three and four.

70.00% or above	First Class Honours
60.00% – 69.99%	Second Class Honours (Upper Division)
50.00% – 59.99%	Second Class Honours (Lower Division)
40.00% – 49.99%	Third Class Honours
35.00% – 39.99%	Pass without Honours.

If you are just below a class boundary and satisfy both the following criteria, then you will automatically be raised into the next class:

- (a) the Final Average must be within 2.00% of one of the classification boundaries listed above;
- (b) at least four half unit marks counting in the final stage must be above the relevant classification boundary.

If you fail to qualify for the award of an MSci degree, your fourth year performance is disregarded, and you will be considered for a BSc award as above; you will be awarded the BSc degree class assigned at the end of your third year

7.7 Assessment in BSc and MSci Years 1 – 3

Each degree course is composed of a number of degree course units. The outcome of your degree is based on an algorithm that consists of a weighted sum of your performance in each course unit.

Each course or half course unit worth 15 credits is assessed with a mark out of 100. The pass mark for each module in the 1st, 2nd and 3rd year is 40%.

For most modules the final assessment is a combination of marks from different assessment methods. For each course unit the relative weighting of each assessment element is given in the module specifications, which may be found on the [Physics Department Moodle page](#).

For lecture-based modules the largest component of the assessment is usually a two hour written examination at the end of the year in which the module is taught.

Other elements of assessment may include:

- coursework problems – completed during self-study time and submitted to a deadline;
- in-class tests – problems answered by students in a lecture given over mostly to the test.

For most laboratory courses assessment includes consideration of scientific content, clarity, presentation and demonstration of understanding.

For first year laboratory-based modules, assessment is through marking of laboratory notebooks, formal reports and oral presentations.

The second year laboratory modules are linked to specific degree programmes. Assessment is through marking of laboratory log books, formally written reports and an oral presentation.

In the third year, all students develop their scientific skills in a series of multi-week projects, assessment of the scientific and presentational aspects of reports and oral presentations, and those on the BSc courses carry out an individual project supervised by a member of staff.

Assessment is based on the scientific content and the standard of presentation of a written report and a talk.

The development of scientific and transferable skills is specifically assessed in at least one module each year, based on work done during the year. In years one and two, these modules are composed of different parts with different skills developed in the different parts

7.8 Assessment in the MSci Year 4

For most modules the largest component of the assessment is a two and a half hour written examination. There is coursework associated with most modules that typically contributes 10% to the overall assessment for the module. The relative weight of each is given in the module specifications.

The Major Project is assessed principally on the basis of a written report, with the remainder based on an oral and poster presentation. The Research Review is assessed mainly by a written report with an oral presentation.

The pass mark for 4th year modules is 50%.

7.9 Marking Scheme

The marking scheme used can be interpreted broadly as set out in the following table. It can be applied to any piece of work, although details depend on the type of assignment being marked. It is consistent with the UK degree classification system and is understood widely both inside and outside the university system, by employers for example. Students should be aware that the scale typically awards numerical marks that are significantly lower than marking systems used in schools. A mark of 40% is regarded as the minimum for a pass in both examinations and coursework (50% for 4th year MSci).

Most work contributing to degree assessment or progression is double-marked. The first marker is normally the module unit co-ordinator. The Visiting Examiners check and approve all examination papers and a sample of the marked work. Course marks remain provisional until approved by the College Board of Examiners.

Marking Scheme with assessment criteria and associated marks

Marking Scale	Typical characteristics (as appropriate)
90 - 100%	Exceptional work. Extremely well argued or executed, showing exceptional insight and understanding. All aspects of the problem addressed. Outstanding presentation.
80 - 89%	Outstanding work. Very well argued or executed, showing considerable insight and understanding.
70 - 79%	Excellent work. Very well argued or executed, full use of information given or found, accurate calculations, very good presentation.
60 - 69%	Good work. Well-argued or executed (only minor flaws), good use of information given or found, good insight, possibly minor flaws in detailed calculations, good presentation.
50 - 59%	Competent work. Reasonable argument or execution but with some flaws, fair use of information given, some insight, some errors or omissions in calculations, fair presentation.
40 - 49%	Modest work. Success in limited aspects of the argument or execution, some use of information given or progress in calculations, significantly incomplete, modest presentation. Work displaying deficiencies and omissions but not serious enough to warrant failure.
30 - 39%	Poor work. Limited arguments or execution, limited use of information given or progress in calculations, unacceptably incomplete, poor presentation. A marginal failure.
20 - 29%	Very poor work. Very little valid argument or execution, little use of information given to address the topic, very little progress with calculations, very poor presentation.
10 - 19%	Extremely poor work. No valid argument or execution, negligible use of information given to address the topic, no progress with calculations, extremely poor presentation.
0 - 9%	Unacceptable work. Virtually devoid of any evidence of knowledge or understanding of the subject.

7.10 Progression requirements

MSci: first attempt requirements

At the second and third stage, MSci students must satisfy the progression conditions at the first attempt to stay on the MSci degree programme. Otherwise, they will be transferred to the corresponding BSc degree programme. At the final (fourth) stage MSci students must satisfy the award conditions at the first attempt to be awarded an MSci degree. Otherwise, they will be awarded a BSc degree based on their stage one to three results. (Stage one results do not contribute to the final average.) In the case of accepted Extenuating Circumstances applications, First Sits may be awarded. Exceptionally, First Sit retakes count as taken at the first attempt.

Progression requirements under new UG Regulations for students who commenced their studies in or after September 2015

Progression to Second Stage

PH1110	PH1120	PH1140	PH1150	PH1xxx	PH1xxx	PH1xxx	PH1xxx	Progression/Condonement	Summer resits - capped at 40%	Next academic year
								Progress		
								Condone 1 course		Option to resit condoned course
									Summer resit in one course	
								Condone 2 courses		Option to resit condoned courses
								Condone 1 course	Summer resit in one course	Option to resit condoned course
									Summer resits in two courses	
								Condone 2 courses	Summer resit in one course	Option to resit condoned courses
								Condone 2 courses	Summer resit in one course	Option to resit condoned courses
								Condone 1 course	Summer resits in two courses	Option to resit condoned course
								Cannot progress		Repeat/resit
								Condone 2 courses	Summer resit in two courses	Option to resit condoned courses
								Condone 2 courses	Summer resits in two courses	Option to resit condoned courses
								Condone 2 courses	Summer resits in two courses	Option to resit condoned courses
								Cannot progress		Repeat/resit
								Cannot progress		Repeat/resit
								Cannot progress		Repeat/resit
								Non-condonable	Summer resit	
								Non-condonable	Summer resit	
								Cannot progress		Repeat
								Condonable		Not possible to repeat/resit

>=40%

<40% can't progress, stage average insufficient
 Must pass PH1110 and PH1120 in order to progress
 Must have >=30% in PH1140 and PH1150 in order to progress
 Summer resits only if student then be able to progress
 Can't retake module already passed. Resits capped at 40%.

Stage/Credits	Condonements	MSci Average
1 120	BSc: 30+30	>=40%
2 240	MSci: 30	>=50%
3 360	30	>=55%
4 480	30	

Progression to Third Stage

PH2130	PH2210	PH2150	PH2xxx	PH2xxx	PH2xxx	PH2xxx	PH2xxx	MSci Progression	Progression/Condonement Max of 30 condonements in 1st and 2nd Stage	Summer resits - Capped at 40%	Next academic year
								>50%	Progress		
								>50%	Condone 1 course		Option to resit condoned course
								To BSc		Summer resit in one course	
								>50%	Condone 2 courses		Option to resit condoned courses
								To BSc	Condone 1 course	Summer resit in one course	Option to resit condoned course
								To BSc		Summer resits in two courses	
								To BSc	Condone 2 courses	Summer resit in one course	Option to resit condoned courses
								To BSc	Condone 2 courses	Summer resit in one course	Option to resit condoned courses
								To BSc	Condone 1 course	Summer resits in two courses	Option to resit condoned course
								To BSc	Cannot progress		Repeat/resit
								To BSc	Condone 2 courses	Summer resit in two courses	Option to resit condoned courses
								To BSc	Condone 2 courses	Summer resits in two courses	Option to resit condoned courses
								To BSc	Condone 2 courses	Summer resits in two courses	Option to resit condoned courses
								To BSc	Cannot progress		Repeat/resit
								To BSc	Cannot progress		Repeat/resit
								To BSc	Cannot progress		Repeat/resit
								To BSc	Non-condonable	Summer resit	
								To BSc	Non-condonable	Summer resit	
								To BSc	Cannot progress		Repeat/resit
								Condonable			Not possible to repeat/resit

>=40%

<40% can't progress, stage average insufficient
 MSci - must pass PH2130 and PH2210 + 4 in order to progress
 Must have >=30% in PH2150 in order to progress
 Summer resits only if student then be able to progress
 Can't repeat module already passed. Resits capped at 40%

Stage/Credits	Condonements	MSci Average
1 120	As	>=40%
2 240	above	>=50%
3 360	30	>=55%
4 480	30	

7.11 What to do if things go wrong – Extensions to deadlines

Please refer to the Extensions Policy and guidance on the College's webpage about [Applying for an Extension](#). It is important to apply before the original deadline of the assessment.

Please note: Not every assessment is eligible for an extension.

College Extensions are applicable for the following:

1. PH1140: Formal report
2. PH1141: Formal report
3. PH1150: Communication skills - report
4. PH2150: Project report
5. PH2250: Final formally written report
6. PH2260: Final formally written report
7. PH2270: Final formally written report
8. PH3010: Statistics project report
9. PH3010: Final project report
10. PH3040: Essay
11. PH3110: Project report
12. PH4100: Project report
13. PH4110: Report

For all other coursework, including regular weekly or fortnightly homework

Applications for extensions may be made in writing via email to the relevant module leader in advance of the original deadline along with the details of the extenuating circumstances (see [Extenuating circumstances – Guidance for students](#) for details on what this constitutes). Due to the structure of some modules, not all extensions can be granted.

Students that miss deadlines through illness should see the staff member concerned on their return. Where possible, new deadlines should be agreed with the member of staff concerned *before* the stated deadline.

Note that the loss of coursework prior to submission due to any type of computer failure (*e.g.* file corruption) is not an acceptable reason for late submission or non-submission of work. It is your responsibility to follow well-known IT precautionary procedures. Specifically, frequently back up your work to a location remote from your PC. You are also strongly advised not to leave irreplaceable work (lecture notes, coursework, project reports) in an unattended car, where they or the car may be stolen):

7.12 Summer Resits

The Summer Vacation Assessment Period (SVAP), which includes the summer resit exams, will run in the second half of August and the beginning of September during the academic year. The exact dates will be announced in due course.

After the end of the Summer Term, you will be informed which if any assessments you may take during SVAP and how to register for them. You will also be informed how the mark for a module you retake during SVAP will be determined.

Only failed components can be retaken. Marks for passed components will be carried forward. If you failed the exam, it may not be possible to retake failed coursework components during SVAP. Instead, the SVAP exam mark may be scaled to account for the weights of the failed coursework components.

7.13 Support and exam access arrangements for students requiring support

Some students at the College may have a physical or mental impairment, chronic medical condition, or a Specific Learning Difficulty (SpLD) which would count as a disability as defined by the Equality Act (2010) that is, "a physical or mental impairment which has a long-term and substantial effect on your ability to carry out normal day-to-day activities". It is for such conditions and SpLDs that [Disability and Neurodiversity Team](#) (D&N) can put in place adjustments, support and exam access arrangements. Please note that a "long-term" impairment is one that has lasted or is likely to last for 12 months or more.

7.14 Academic misconduct

In addition to reading Academic Misconduct guidelines in the [College UG Student Handbook](#) you are expected to complete and pass the mandatory Moodle course: [Academic Integrity \(SS1001\)](#) or [Academic Writing Skills \(SS1000\)](#) before submitting your first assessment. Further information on referencing can be found in the PH1140/1150 Scientific Skills Handbook - Communication Skills Module. All first years have a copy of this Handbook.

The College uses Turnitin via Moodle - widely known as 'the plagiarism detection service'. Turnitin is an online service that carries out electronic comparison of students' work (project reports, dissertations and essays) against electronic sources, including other students' work.

7.15 Prizes

The following prizes are awarded annually to students in Physics:

- Driver Prize (two) To the best final year student and the best third year student(s) in the department.
- Leo Pincherle For excellence in Physics, to a first and a second year student.

The following prizes are awarded annually in the Science Faculty:

- Murgoci To the best first year student in the Faculty of Science.
- Lilian F Heather To the best first year student of Physical Sciences.
- Martin Holloway To the best science finalist.

8 Engagement Requirements

Students in the Department of Physics are expected to engage fully with their studies throughout the year, as measured by (where applicable):

- attendance of weekly tutorial sessions;
- attendance of labs;
- attendance of other compulsory sessions (e.g. weekly Live Sessions);
- submission of online summative assessment quizzes;
- submission of summative assessment coursework.

The Year Tutors, the Senior Tutor and the Head of Department meet regularly throughout the academic year to monitor student engagement data. Where the data indicates insufficient engagement and there are no apparent acceptable reasons for this, the department will initially send an email warning from the Senior Tutor, which may lead to a meeting with your Year Tutor or the Senior Tutor.

9 Careers Information (Department Specific)

Please refer to [College Undergraduate Student Handbook](#) for information about the College's Careers Service.

The department's interest in you is not only concerned with your academic progress; we also want to ensure that you find an interesting and fulfilling career at the end of your degree. With this in mind, throughout your degree we will organise various activities that will make you think about the type of career and employers that you might want to pursue after you graduate.

The department has a SEPnet Employer Engagement Officer, who organises regular talks by current industrial partners, signposts relevant external events, advises on employability skills and will help with any placement queries. They are also responsible for the SEPnet placement summer scheme available to all second year students and those third year students who are on the MSci programme.

There is also a department Careers Liaison Officer. You can drop in to talk with them at any time about aspects of your career plans, but we strongly recommend that you make an appointment for a longer discussion before your final year. If you are thinking of further study after your degree (an MSc course or a PhD) you can get good advice from any member of staff.

You will be encouraged to create a LinkedIn account. The department likes to keep in touch with you after you graduate and has appointed an Alumni Officer to organise various events for alumni. When you graduate, please make sure we have a contact address and your email address.

10 Health and safety information

The [Health and Safety webpage](#) provides general information about our health and safety policies. The Departmental Health and Safety Coordinator for Physics is:

Andy Alway a.alway@rhul.ac.uk Room T113

10.1 The Department: practical information

The following notes provide information of a general nature about security and safety within the department.

Normal Hours. The department is normally open Monday to Friday 08.00 to 17.30 and closed at weekends and public holidays. Undergraduates are only allowed in the department outside normal hours when supervised, e.g. department or Physoc functions, or work, e.g. using the observatory. Undergraduates will not be allowed to work on their own.

Smoking. Smoking is not allowed in any college building, or within five metres of it. This also applies to e-cigarettes.

Eating and drinking. The department has a kitchen in T132 where you can prepare drinks and heat food. Food and drink can be eaten in the kitchen, the resources room (Tolansky T118), or the foyer. Food and drink cannot be consumed in laboratories or workshops.

Fire safety. All staff and students must evacuate the building promptly when the fire alarm sounds. They must head directly to the nearest exit and not take a detour to collect belongings. On leaving the building, go to assembly point number 12. Do not re-enter the building until the all-clear has been given by a Physics department fire marshal or a member of college security.

The same procedure will be used in the event of a bomb scare or gas leak. The fire alarm will be tested at 8.30 am every Thursday morning, except during the exam period.

First aid. The department has four first aiders. These will be available Monday to Friday, 8.30 to 17.30. In the event of an accident, a first aider must be called. If a first aider is not available, then pick up any internal phone and dial 444 to get in touch with College Security staff.

Accidents and incidents. Any accident must be reported, and an accident report form completed, within 24 hours, by the departmental health and safety co-ordinator. An incident is an occurrence that could have resulted in an injury, but didn't.

Safety. It is important that you are safe in the department at all times, and it is important that you become familiar with all of the necessary safety procedures and working practices that may apply to you. Everyone has a legal duty to ensure that they work in such a way that ensures the safety of themselves and others. All experiments and practices have been risk assessed, and coupled with a 'safe system of work', they should control all hazards that individuals are exposed to. The Head of Department is responsible for health and safety in the department, and he/she is assisted by a Health and Safety Co-ordinator.

Ionising radiation. Work with ionising radiation is strictly controlled, and must conform with Royal Holloway's site rules, and the Physics department's local rules. If a student has to use sources of ionising radiation during their studies, they will be given more instruction at the time.

Laser pointers. Students may not bring lasers or laser equipment on site under any circumstances. If a student requires a laser pointer for a presentation, they can borrow one from the Teaching Lab.

Gender neutral toilets. There are gender neutral toilets in the Boilerhouse café, Bedford Building, and Student's Union.

10.2 Code of practice on harassment for students

The College is committed to upholding the dignity of the individual and recognises that harassment can be a source of great stress to an individual. Personal harassment can seriously harm working, learning and social conditions and will be regarded and treated seriously. This could include grounds for disciplinary action, and possibly the termination of registration as a student.

The College's [Code of Practice on personal harassment for students](#) should be read in conjunction with the [Student Disciplinary regulations](#) and the [Complaints procedure](#).

10.3 Lone working policy and procedures

The College has a 'Lone Working Policy and Procedure' that can be found [here](#).

Lone working is defined as working during either normal working hours at an isolated location within the normal workplace or when working outside of normal hours.

Lone working by undergraduates in the Department of Physics is **NOT** allowed.

Any health and safety concerns should be brought to the attention of the Departmental Health and Safety Coordinator or the [College Health and Safety Office](#).

It is likely that most activities performed by undergraduate students will take place on College premises and risk assessments for these are available from the Lab and Stores Technician in the Teaching Laboratory. In cases where students travel off-site, the departmental Health and Safety Officer should be advised, and individual risk-assessments performed prior to the activity. However, the principles contained in the above section will apply to students undertaking duties off campus.

10.4 Using computers

Students use computers extensively during the course of their studies, and there are some practical tips that you can follow to ensure that extensive computer use does not impact on your health.

- Take regular breaks. Try to take a 5 or 10 minute break after every hour spent on the computer. The aim is to get out of the chair and do something else or walk around, to exercise your muscles and rest your eyes;
- Make sure that the computer screen is at the right height. As a general rule, your eyes should be level with the top of the screen. Being hunched over a laptop is not good for your neck or shoulders;
- Make sure that you sit on a comfortable chair, set at a comfortable height for you, and sit upright and in a comfortable position. No crossed legs or feet on tables;

If you do find yourself suffering from eyestrain, or aching limbs or joints, stop using a computer immediately and take a long rest (preferably overnight). If the symptoms persist, ask for some advice from the departmental Health and Safety Coordinator.

11 Facilities

11.1 Facilities and resources within your department

11.1.1 Telescopes

The four-metre dome on top of the Wilson Building houses the department's telescope – a 12 inch Schmidt-Cassegrain computerised $f/10$ telescope. Depending on weather conditions and usage by PH2260, PH3110 and PH4100 students, regular sessions are organised by the Physics Society to observe objects such as planets, multiple star systems, galaxies, galactic clusters, and globular clusters. In addition to the main telescope two portable telescopes (10 inch Schmidt-Cassegrain and 6 inch Newtonian) are available for supervised observations.

11.1.2 Mathematica

Extensive use is made of the *Mathematica* software system in several of our courses. *Mathematica* is available on the College PC network, including the PCs in Tolansky, for you to use for your studies and coursework. As a Royal Holloway student it is possible for you to install a copy of *Mathematica* on your own computer. Free to download from [here](#).

11.1.3 Special lectures

All first year students are expected to attend the series of special lectures. The aim is to broaden your knowledge of physics outside the curriculum and, as part of the PH1140 Scientific Skills module, students will be required to write a Review Article based on a topic from one of these lectures.

11.1.4 Colloquia

The department organises a regular programme of colloquia - talks given about topics in Physics outside the normal degree programmes, intended to broaden the knowledge of us all. The talks may be given by academic staff, postdoctoral fellows and PhD students, but they are usually given by academic speakers from Universities in the UK and abroad. The level varies but most should be intelligible to final year students. Colloquia are frequently an excellent source of careers information. Details are advertised on our website.

11.1.5 Physics Society

The Physics Society (Physoc) is run by students and organises events throughout the year, including visits to scientific establishments, seminars and social functions. You are encouraged to play an active role in the Society and can join their [Facebook page](#).

11.1.6 Institute of Physics

The department encourages you to become a student member of the Institute of Physics, the professional body for physicists. You will be given details on how to join during the first few weeks of term.

All our degree programmes in Physics have been accredited by the Institute of Physics as leading to Associate Membership of the Institute on graduation and to Chartered Physicist designation (MInstP, CPhys) after an appropriate period of supervised employment as a physicist.

11.1.7 Summer Internships

The Department of Physics takes the employability of its graduates very seriously. Research suggests that students who have completed internships during the course of their degree have a distinct advantage over other graduates. During the summer after your second year and third year (for non-finalist students), you will have the opportunity to participate in various summer internships:

Departmental research internships: You could participate in cutting edge research alongside an academic member of staff in the department.

SEPnet Summer Internships: Your SEPnet Employer Engagement Officer will circulate a list of paid internships with Physics employers at the start of the spring term. SEPnet internships for Royal Holloway students have included Accelogress Limited, BAE Systems (ATC), Culham Centre for Fusion Energy, MeVitae, Symetrica Security Ltd, Things We Don't Know and Vzzual.

Other Employer Internships: Other opportunities run by large employers such as IOP, SPiN, NPL, AWE, DSTL, P&G, Nuffield, SURE and DAAD are open to Physics undergraduates and you are encouraged to apply for these. They are usually advertised from October and your SEPnet Employer Engagement Officer will circulate details.

All internships are awarded on a competitive basis and students are encouraged to maintain an up to date CV to allow applications to be made in advance of the closing date.

11.2 The Library

The Information Consultant for Physics is Eva Garcia Grau, who can be contacted at Eva.GarciaGrau@rhul.ac.uk

11.2.1 Physics Resources Room (T118)

In addition to the books available in the Emily Wilding Davison Library, the department provides some books for physics students in the Physics Resources Room in T118. This is not a formal library so the stock held there is limited. It is not meant to be a replacement for the Emily Wilding Davison library but merely an additional resource for your studies. You must not remove any text books from T118. The Resources Room (T118) is used by all members of the department and contains a selection of the recommended textbooks, and study seating is provided. A small number of PCs are available for general use. The Resources Room must be kept clean and tidy. Occasionally the room is made unavailable to students during departmental meetings and other functions.

There are facilities for making hot drinks in T132 and these may be consumed in the Resources Room. This area is available for students to use on condition that it is kept clean and tidy. There is a soft drinks dispenser on the ground floor foyer of Wilson and a chilled water dispenser in T118.

12 Map of the Egham Campus

