Section A: Introductory Information

Welcome

Welcome to Newcastle University. We hope that your time here will be both successful and enjoyable.

This handbook aims to provide you with all the information you need to make your learning experience as rewarding as possible or to direct you to where such information may be found. Take time during Induction Week to read through this guide and keep it for future reference. It sets out important information about your degree programme, tells you what we expect from you, and explains what you can expect from us. It also tells you where to go if you have questions or if something goes wrong.

I hope this handbook will provide you with most of the information you require for your studies. We want you to do as well as possible, so you should always feel free to discuss your queries or concerns with me or with your personal tutor, the Senior Tutor or with one of the members of our staff in the School Office. All relevant contact details can be found in this handbook.

Good luck with your studies and I hope you enjoy your time studying in Newcastle.

Dr Angela Dyson
Physics Degree Programme Director
September 2019
Summary of Programme Commitments

The University’s Student Charter, explained more below, requires that students are provided with a ‘programme handbook which details any professional requirements, contact hours, mode of programme delivery, assessment criteria, examination arrangements and regulations, academic guidance and support, and appeals and complaints procedures’. The purpose of this summary is to help you locate further details about this key information in your handbook.

<table>
<thead>
<tr>
<th>Average number of contact hours for this Stage/programme</th>
<th>See page 12</th>
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<tbody>
<tr>
<td>Mode of delivery</td>
<td>The BSc and MPhys Physics programmes are delivered in full time linear mode and fit within the University’s standard pattern of terms and semesters. See page 7.</td>
</tr>
<tr>
<td>Normal notice period for changes to the timetable, including rescheduled classes</td>
<td>Where possible, at least one week’s notice will be given for timetabling changes. In the event of this happening students will be contacted by email.</td>
</tr>
<tr>
<td>Normal notice period for changes to the curriculum or assessment</td>
<td>Changes after you register for the academic year are rare and are generally unavoidable. If changes are required, they will be made in the previous semester.</td>
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<tr>
<td>Normal deadline for feedback on submitted work (coursework)</td>
<td>See Section E: Assessment and Feedback, Feedback on Assignments on pages 20-25.</td>
</tr>
<tr>
<td>Normal deadline for feedback on examinations</td>
<td>See Section E: Assessment and Feedback, Feedback on Assignments on pages 20-25.</td>
</tr>
<tr>
<td>Professional recognition</td>
<td>The BSc and MPhys Physics programmes are accredited by the Institute of Physics (IOP).</td>
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<tr>
<td>Assessment methods and criteria</td>
<td>See Section E: Assessment and Feedback on pages 20-25.</td>
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<tr>
<td>Academic guidance and support</td>
<td>See Section C: Student Support page on page 13.</td>
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</table>
Important School Contact Details

School of Mathematics, Statistics and Physics
Herschel Building, Newcastle University
Newcastle upon Tyne, NE1 7RU

Website: www.ncl.ac.uk/maths-physics
Email: maths.physics@ncl.ac.uk
Telephone: 0191 208 3944

Head of School
Professor Andrew Willmott
Email: andrew.willmott@ncl.ac.uk

Director of Excellence in Learning and Teaching / Academic Lead for Employability and Enterprise
Dr Phil Ansell
Email: phil.ansell@ncl.ac.uk

Undergraduate Degree Programme Director (DPD)
Dr Angela Dyson
Email: angela.dyson@ncl.ac.uk

Senior Tutor
Professor Ian Moss
Email: ian.moss@ncl.ac.uk

School Manager
Christine Wright
Email: christine.wright@ncl.ac.uk

School Learning and Teaching Manager
Jacqueline Storey
Email: jacqueline.storey@ncl.ac.uk

School Learning and Teaching Team Leader
Jill Elliott
Email: jill.elliott@ncl.ac.uk

School Learning and Teaching Administrators
Maria Adair / Robert White
Email: maria.adair@ncl.ac.uk /robert.white@ncl.ac.uk

School Learning and Teaching Assistants
Lauren Daley / Emma Simblett
Email: lauren.daley@ncl.ac.uk /emma.simblett@ncl.ac.uk

School Receptionist
Lauren Thompson
Email: lauren.thompson@ncl.ac.uk
Key Dates

2019-2020 Semester and Term Dates

<table>
<thead>
<tr>
<th>Autumn Term</th>
<th>Monday 23 September 2019</th>
<th>Friday 13 December 2019</th>
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<tbody>
<tr>
<td>Spring Term</td>
<td>Monday 6 January 2020</td>
<td>Friday 27 March 2020</td>
</tr>
<tr>
<td>Summer Term</td>
<td>Monday 27 April 2020</td>
<td>Friday 12 June 2020</td>
</tr>
<tr>
<td>Semester 1</td>
<td>Monday 23 September 2019</td>
<td>Friday 24 January 2020</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Monday 27 January 2020</td>
<td>Friday 12 June 2020</td>
</tr>
</tbody>
</table>

The undergraduate academic year is organised into three terms. Major holidays (Christmas and Easter) occur between terms. The undergraduate academic year is ALSO organised into two semesters. Semester 1 includes 1 week of induction and registration, 12 teaching weeks, and 2 examination weeks; Semester 2 includes 12 teaching weeks and 3 examination weeks. You are expected to be in attendance during every term and for all teaching and examination weeks during the semesters.

Examination dates

Most examinations are scheduled either at the end of Semester 1 (January) or at the end of Semester 2 (May/June), but if you do not pass at the first attempt, you may be required to take an additional resit examination at the end of August.

2019-2020 Exam Dates:
- Semester One: Monday 13 January 2020 to Friday 24 January 2020 (including Saturday 18 January)
- Semester Two: Monday 18 May 2020 to Friday 5 June 2020 (including Saturday 23 May and Saturday 30 May)
- Resits: Monday 17 August 2020 to Friday 28 August 2020 (including Saturday 22 August)

You must ensure that you are available during all term time periods and examination periods.

University Timetables

You should use the student timetables website (www.ncl.ac.uk/timetable) to access your timetable as well as information on how to read it, find your way around campus, locate teaching rooms and buildings, and link your timetable to your smartphone. There is also a guide for students on understanding the timetable here: www.ncl.ac.uk/timetable/StudentTimetableGuide.pdf.

Please note that the timetable is subject to change during the semester – especially at the beginning of each semester – so please check the website regularly.

The Student Charter and the Newcastle Offer

Newcastle University aims to provide a high standard of teaching and a rich academic environment in which to learn and study. To this end, you will find that much of a staff member’s time, particularly during term-time, is devoted to all aspects of teaching. You should, however, be aware of the other academic activities – both research and outside engagement – that staff members undertake and which make calls upon their time.
The Student Charter (https://www.ncl.ac.uk/pre-arrival/regulations/#studentcharter) clarifies exactly what you can expect from the University during your time on campus. In summary, you can expect Physics and the University to:

- Provide a modern curriculum and high standards of teaching
- Provide relevant information about the degree programme and individual modules
- Provide opportunities for you to develop graduate and research skills
- Provide access to an excellent library and IT facilities
- Work with you to listen to student feedback and shape the University experience
- Publish clear information on programme costs, payment options and any additional costs
- Provide clear deadlines for assignments and timeframes in which you will receive feedback
- Notify you in advance of any planned changes in the curriculum and timetable
- Provide academic and personal support, through the personal tutoring system and professional support services
- Ensure that all assessments are relevant and well-matched to each Stage of your study

As a University student, you must take responsibility for your own approach to studying and learning. The emphasis in class time will be on providing information and ideas, but you are expected to make the best use of the information that is presented to you. This requires regular attendance at all sessions in your timetable and submission of all assignments by the due dates. It also requires considerable study outside formal contact hours. In particular, the Student Charter clarifies exactly what is expected of all students.

In summary, you are expected to:

- Attend and participate in all timetabled activities
- Familiarise yourself with all information provided by the University and follow recognised procedures
- Take responsibility for your own learning and devote the necessary time in private study to understand and learn the material
- Submit all work on time and collect your feedback when it is returned
- Seek help if you are encountering any difficulties and tell your personal tutor of any health or personal problems that could affect your work
- Work with your student representatives to ensure that you make staff aware of any problems or things not working well
- Complete feedback forms such as module evaluation forms and surveys to help the University improve

As a University student, you are expected to maintain the highest levels of behaviour and consideration toward other students, staff and members of the wider community. The University expects students to conduct themselves in a reasonable and appropriate manner at all times, both on and off campus, to foster mutual respect and understanding. This includes:

- Behaving and communicating in ways that are unlikely to offend others
- Complying with all reasonable requests from staff
- Being considerate to neighbours, especially in relation to noise levels and rubbish
- Acting within the law

To register at the University, you must accept the following declaration as part of the online registration process. 'I hereby promise to conform to the discipline of the University and to all statutes, regulations and rules in force for the time being in so far as they concern me'. The Student Discipline procedure can be accessed via the following link:
https://www.ncl.ac.uk/students/progress/Regulations/Procedures/disciplinary/
The Newcastle Offer provides additional explanation about what the University offers undergraduate students for their fees and explains how the University delivers on its promises. More information on the Newcastle Offer is available online: https://www.ncl.ac.uk/ltds/governance/modules/dph/introductory/charter/.

**Attendance**

The University wishes to support all students to the completion of a programme of study and we know that good attendance plays an important part in successful outcomes. It is important that all students adhere to the terms of the Student Charter and attend all timetabled sessions in a punctual manner. The University also has a legal obligation to monitor the attendance of international students and to report to UK Visa and Immigration any student who is not attending regularly.

Attendance at classes is monitored to help us to identify, contact and support at an early stage any student whose attendance record gives us cause for concern. On some degree programmes most or all classes are monitored, and in others just a proportion. We use the SMART card scanners located throughout campus to record attendance and your attendance at timetabled classes is recorded whenever you are asked to scan your SMART card. Different degree programmes record attendance at different types of classes and your programme’s policy on which types of classes it monitors should be made clear to you at induction.

If you are unable to attend for any reason, you should notify your personal tutor and promptly submit a notice of absence form along with any necessary evidence. You can do this through S3P. International students should also seek approval for vacations or plans to leave the UK in the summer period, as this may have visa implications.

A significant number of absences means that you are not making satisfactory progress and action may be taken under the University General Regulations that could result in termination of your programme of study. International students should note that persistent and unauthorized/unexplained absence, even for compassionate and compelling reasons, may be communicated to UK Visa and Immigration which could result in your UK visa being curtailed.

See https://www.ncl.ac.uk/students/progress/Regulations/SPS/Attendance/ for more information on University attendance requirements.

**Student Self Service Portal (S3P)**

The Student Self Service Portal (S3P) is an on-line system which you should use as your first point of call if you want to:

- Register on your programme of study
- Keep details (addresses, etc.) up to date
- Pay fees
- View and print documentation to confirm your student status
- Confirm module choices for the next academic year
- Report an absence
- Submit a Personal Extenuating Circumstances (PEC) form

Further detail is available online at https://www.ncl.ac.uk/students/progress/student-resources/s3p/.
You can log in online at s3p.ncl.ac.uk/login/index.aspx.

Remember that S3P does not use your campus log-in details. You will need your campus username and a DIFFERENT password.
Section B: Degree Programme and Module Information

Overview and Important Definitions

This section provides information specific to your degree programme. It is important you that have an understanding of the programme as a whole and how each module and Stage contributes to it.

Key Definitions:

Module – an element within a programme of study. The size of the module (relative to the programme as a whole) is measured with reference to your learning time. The normal undergraduate academic year is 120 credits. Your total study time is expected to total 100 hours for each 10-credit module.

Compulsory modules – modules that you must take in order to fulfill the requirements of the Degree Programme.

Core modules – those modules which you must PASS to be allowed to proceed.

Optional modules – those which you choose to take as they suit your interests and career aspirations.

Aims – each programme will have a set of aims that explains the overall goals of the programme. These aims will relate to programme structure, student outcomes, placements (where relevant), and accrediting bodies (where relevant). Modules will also have a set of aims that explains the primary objectives of each specific module.

Learning outcomes – each programme will have a set of learning outcomes that specifies the skills and knowledge that students are expected to develop over the course of the programme. Modules will also have specific skills outcomes and knowledge outcomes that specify what you will learn and what skills you will develop on each module.

Degree programme regulations – explain which modules can be taken, programme-specific progression rules (i.e., how to ensure that you advance to the next Stage), and programme-specific degree classification rules (i.e., how your final degree classification will be determined). All degree programme regulations are available here: www.ncl.ac.uk/regulations/docs/.

Degree programme specifications – the specifications for each degree programme contain information on the aims, learning outcomes, teaching and learning methods and assessment strategies specific to each programme. All degree programme specifications are available on-line alongside the relevant regulations (see link above).

Modules and Module Choice

The Degree Programme Regulations for your programme explain which modules are compulsory, core, and/or optional on your degree programme. You can look up information on each module in the Module Catalogue (www.ncl.ac.uk/module-catalogue/). This module catalogue will provide key information, including the number of credits, the types of assessment, the types of teaching activities, and the number of contact hours. It also explains how many hours you are expected to spend in independent study, including lecture follow-up, completing coursework, doing background reading, and revising for your exams. The module outline will also explain the aims and learning outcomes of the module and provide you with an overview of the syllabus.
Stage 1 students complete module registration in Induction Week. All continuing students (except for final year students) use S3P to register for the next Stage around Easter each year. All students will be provided with information to help you select any optional modules. Before submitting your selections, you should meet with your personal tutor to ensure that they are appropriate and that they fit with the Degree Programme Regulations.

The S3P system knows what programme you are studying and whether you are studying full time or part time. The system will only let you select the modules associated with your programme to the value of the credits for the relevant Stage of your programme.

**Teaching and Contact Hours**

You will experience a variety of types of teaching during your time at University, each of which has different learning objectives and each of which will contribute to your learning experience in different ways. The University has definitions of the key types of teaching ([www.ncl.ac.uk/ltds/assets/documents/res-contacthours-mofs.pdf](http://www.ncl.ac.uk/ltds/assets/documents/res-contacthours-mofs.pdf)), but the amount and types of contact time vary quite a bit between modules, Stages and programmes.

**Graduate Skills Framework**

Your University programme is primarily intended to educate you in a particular discipline, but it will also provide training in transferable skills and personal development. The University maps these skills according to the Graduate Skills Framework ([www.ncl.ac.uk/quilt/assets/documents/str-gsf-framework.pdf](http://www.ncl.ac.uk/quilt/assets/documents/str-gsf-framework.pdf)). Each of your modules will be clearly linked to a series of graduate skills, some of which will be present in the learning and teaching activities and some of which will be assessed. You will be able to identify which skills are present in each module by looking at the module catalogue entry ([https://www.ncl.ac.uk/ltds/assets/documents/str-gsf-framework.pdf](https://www.ncl.ac.uk/ltds/assets/documents/str-gsf-framework.pdf)). Identifying the skills present in each module that you take will help you to recognise key skills that you can mention in interviews and on your CV.

**Placements and Study Abroad Opportunities**

If you would like to spend a semester or a year abroad, you should discuss this with the Degree Programme Director or the International Coordinator, Dr Lee Fawcett (email lee.fawcett@ncl.ac.uk). If you are interested in taking part in the University’s placement scheme, further information can be found at the following link: [https://internal.ncl.ac.uk/placements/](https://internal.ncl.ac.uk/placements/).
Section C: Student Support

Personal Tutoring

When you arrive at University, you will be assigned a personal tutor. This is an academic member of staff who acts as your first point of contact with the University, and he/she can provide you with any information or advice that you may need throughout your academic career.

The role of a personal tutor, as described in the Personal Tutoring Framework (https://www.ncl.ac.uk/ltds/assets/documents/Personal_Tutor_Framework_2018-19.pdf), is to facilitate students’ personal and academic growth. The personal tutor is there to help with any issues you may have, from personal problems that could be affecting your studies, to giving advice when picking modules, to just being available for a chat.

As a bare minimum, you should see your personal tutor at least twice during Semester 1 of your first year and then at least once per semester after that. You should take the initiative to schedule meetings with your personal tutor if you need to talk about any difficulties.

It is possible to change your personal tutor if you’re unhappy for any reason. You don’t have to give any reasons for changing your tutor. The Senior Tutor will be able to explain the procedures for changing your tutor.

All tutor meetings with students will be recorded through ePortfolio (either you or the tutor can initiate a meeting, through email, phone or ePortfolio). The record can be made after the meeting, and the only requirement is that the record states when the meeting took place. You can also take notes on your meetings and keep them in ePortfolio – this is a good place to keep track of your concerns and any decisions that you’re making with the help of your personal tutor. You can be assured that the meeting record on ePortfolio is strictly confidential, and only those people who attended the meeting (and possibly the Senior Tutor) will be able to see your notes.

The personal tutor system depends upon you and your personal tutor both contributing to the relationship: a personal tutor can’t help you if you don’t show up to a meeting, and you need to be open and honest with your tutor in order to receive the best advice. At the end of your degree, you can ask your personal tutor to provide you with references – for these to be good references, your personal tutor needs to know you well enough to write them. This means that you should attend all arranged meetings, respond promptly to emails, and keep your personal tutor informed if you have any concerns.

Peer Mentoring

All new undergraduate students will be assigned a peer mentor upon arrival at the University. The goal of peer mentoring is to enable all students to make a smooth transition to feeling at home and settled into the University community – academically, socially and culturally – through access to the advice and support of a more experienced peer.

Your peer mentor can serve as a role model and help you to understand what is expected of you at University. Your mentor should also be very approachable and can help answer questions that you might not want to ask staff. Your peer mentor can also tell you about the social scene at the University and in Newcastle and help to answer practical questions about banking, sport facilities, the library, etc.
Your peer mentor will set up a social media network (using tools such as Facebook or Yammer) to help support this process so remember to look out for information from them. You will also receive a Mentee Handbook to explain the benefits of the scheme, expectations and support available.

The University has a policy that explains peer mentoring schemes (http://www.ncl.ac.uk/ltds/assets/documents/qsh-peerment-principles.pdf).

**Other Sources of Support**

Your personal tutor should always be your first point of contact if you have questions or concerns, but he/she may point you in the direction of other people who can help.

The **Degree Programme Director (DPD)** is responsible for the structure, content and standards of your degree programme. His/her role involves module development, changes to course content, and recruitment activities. Your personal tutor may refer you to the DPD to discuss academic issues.

The **Senior Tutor** acts as a second point of contact if your personal tutor is absent from the University and may provide support for you and your tutor if any complicated issues arise. The Senior Tutor focuses on supporting students who may have personal circumstances that are affecting their overall performance, rather than specific academic issues.

**Student Services (King’s Gate)**

The King’s Gate building provides access to many services you may need, all in one single location. Current opening hours for King’s Gate are as follows:

- Monday and Tuesday – 9 a.m. to 5 p.m.
- Wednesday – 10 a.m. to 5 p.m.
- Thursday and Friday – 9 a.m. to 5 p.m.

When you arrive at King’s Gate, you should go first to the Help Desk Team on Level 2. They are your first point of contact for any questions about Academic Support, Accommodation, Fees/Funding/Finance, Health/Wellbeing, Exchange/Study Abroad, and Visa Support. Both drop-in and pre-booked appointments are available. More information is available online: https://www.ncl.ac.uk/studentservices/.

There are a number of services available, many of which are explained by the Student Wellbeing site (www.ncl.ac.uk/students/wellbeing/). Contact information is also available on this site.

**Student Advice Centre**

The Student Advice Centre is a service of the Student Union staffed by professionals who specialise in student concerns. They can help you by:

- providing information
- listening to any problems
- advising on the options available to you
- helping you resolve difficulties
- referring you elsewhere if need be (to a solicitor, counsellor, specialist agency etc.).
They may even take on your case for you, even to representation stage. You can browse through a range of information, help yourself to leaflets and obtain forms (benefits, help with NHS charges, Access to learning Funds etc.). More information is available from the SAC website: www.nusu.co.uk/sac.

The Student Advice Centre cannot provide immigration advice to International students. If you have immigration questions, you should contact the Visa and Immigration Service (VIS) at King’s Gate for advice.

The Student Advice Centre is situated on the first floor of the Student Union Building. Opening times vary throughout the year, so you could check the weekly schedule before dropping in: www.nusu.co.uk/support/sac/openingtimes/.

During term-time, you may drop in for a brief session with one of the advisers, but for complex or serious problems you should call in or telephone to make an appointment.

Telephone 0191 239 3979; fax 0191 239 3986; or e-mail: student-advice-centre@ncl.ac.uk

Note that anything you say to any of the staff will be treated in strictest confidence and not disclosed without your consent; also that the Union, including the Student Advice Centre, is independent of the University structure and primarily concerned with its members’ welfare.
Section D: What to do if things go wrong

If You Are Ill or Away from the University for Personal Reasons

If you are ill while at University, you should submit an absence notification via S3P as soon as possible. If you are absent for more than seven working days, you must obtain a medical certificate from your doctor and attach it to your absence notice or send it to the Mathematics, Statistics and Physics School Office.

The Student Notice of Absence form should also be used for absences other than sickness – i.e. when you need to be away from the University for personal reasons.

If you believe that your absence has affected your academic performance in an assessment (coursework or exam) or prevented you from attending a required session, you should inform your personal tutor. You should also fill in a Personal Extenuating Circumstances (PEC) form to explain how your illness has affected your studies. If you are reluctant for any details to be known, even to your tutor, because they are sensitive, then you can provide a confidential letter and information in a sealed envelope for the Chair of the PEC committee.

More information about sickness and absence procedures is available here: www.ncl.ac.uk/students/progress/Regulations/SPS/Attendance/sickness.

Personal Extenuating Circumstances

Students who believe that their study or ability to complete assessments is being adversely affected by significant unforeseen and unavoidable personal extenuating circumstances should advise their School by completing the online Personal Extenuating Circumstances (PEC) Form via S3P as close as possible to the time that the problem arose and in advance of any imposed School deadline, so that appropriate adjustments can be considered. Students are advised to carefully read the Guidance for Submission of Personal Extenuating Circumstances which can be found on the Student Progress Webpages at http://www.ncl.ac.uk/students/progress/student-resources/help/ before submitting a PEC application.

Students are strongly encouraged to discuss significant personal circumstances with their Personal Tutor or another member of staff e.g. the Senior Tutor. Tutors may be able to advise on how to phrase the application or whether alternate sources of help may apply. Also, tutors may be able to provide a statement of support, which will be taken in to account when a case is considered.

The PEC form enables the School to consider each case on its merits and, if possible, make an appropriate adjustment. Possible adjustments will vary depending on the time of year, but could include:

- an extension to the hand-in date for a piece of work
- an exemption for a minor item of course work
- a deferral of the assessment to the next normal occasion – generally a deferral to August
- a deferral of the assessment to a later normal occasion
- permission to set aside (ignore) attempts at assessments
- permission to sit an extraordinary examination – i.e. setting an examination at an unusual time
- permission to repeat tuition in residence
- permission to proceed to the next Stage carrying fails
• permission to repeat a period of tuition, setting aside previous attempts (e.g. re-doing a Stage or Semester as if for the first time)
• And, for all students except those starting or restarting undergraduate Stage 1 programmes during 2019/20, there is a positive assessment of the impact of medical or other mitigating circumstances by the Personal Extenuating Circumstances Committee to provide Boards of Examiners with an assessment of the scope and severity of mitigating circumstances affecting a student which have not been addressed by the points listed above (i.e. to recommend the use of discretion where there is evidence in the student profile to support their decision)

NB - personal extenuating circumstances cannot result in existing marks being changed.

It is the student’s responsibility to report any significant personal or extenuating circumstances that have had a substantial impact on their performance in their studies or in their assessments/ examinations immediately, and in advance of an assessment deadline or by the School published deadline for consideration by the Personal Extenuating Circumstances Committee or Board of Examiners (BoE).

It is the student’s responsibility to provide evidence to back up their PEC application. Evidence should outline the problems faced and the period of impact – e.g. doctor’s notes, a statement of support from a tutor, letter from an employer, etc. It is recognised that this can be difficult, but a request is more likely to be approved if evidence is available – particularly evidence of the impact on the specific module/assessment at the time of the assessment.

Requests for adjustments that relate to the following are not normally accepted as the basis of a PEC application:

i. Instances where an appropriate adjustment has already been made.
ii. Retrospective report of illness or other extenuating circumstances, without good reason.
iii. Ongoing medical conditions/disabilities including learning disabilities, or mental health conditions for which the student is already receiving reasonable adjustments via a Student Support Plan (SSP).
iv. Transport problems, excepting those where it can be shown that adequate time was allowed.
v. Unspecified anxiety or examination stress.
vi. Minor infection such as coughs, colds, stomach upsets, headaches or hay fever, unless supported by specific medical evidence.
vii. Distress relating to family pet.
viii. Holidays, house moves, sporting or other social commitments.
ix. Known employment or financial responsibilities.
x. Problems with personal computers, printers or other technology.
xi. Where the circumstances could have been avoided, particularly due to poor time management.

Change of Circumstances (Transfer, Suspend Studies or Withdraw)

Sometimes circumstances do change, and you may decide that you want to transfer degree programmes, suspend your studies or withdraw from the University. If you are thinking about any of these scenarios, you should first speak with your personal tutor so that you can discuss your options. You can also seek confidential advice from Student Wellbeing: (www.ncl.ac.uk/students/wellbeing/about/student/).
If you transfer from one programme in the University to another, you may also be able to transfer the credits and marks that you have earned. You will need to discuss this with the Degree Programme Director of both programmes.

Permission to make these changes often depends upon approval from the Degree Programme Director.

More information on the relevant procedures and the forms you may need to fill in are available here: https://www.ncl.ac.uk/students/progress/Regulations/Procedures/change/. Your personal tutor should be able to help you complete these forms if necessary.

**Complaints and Appeals**

The Student Complaints Procedure is the University’s formal complaints procedure under the Student Charter. It is intended to allow students to make a complaint about a service, a member of staff or another student within the University. The procedure applies to all formal complaints, including those related to harassment or racial equality.

https://www.ncl.ac.uk/students/progress/Regulations/Procedures/complaints.htm.

A complaint can be made on nearly any aspect of your academic studies, but you should be prepared to provide evidence to support any allegation. Please note: a complaint cannot be used to seek to overturn the academic decision of examiners. In all cases you should consider trying to resolve your complaint informally with the individual concerned. Usually, before a formal complaint is accepted, you should have sought to resolve the issue informally.

If you want to complain about another student at the University you should contact the Casework Team by emailing casework@ncl.ac.uk. The email should contain a full explanation as to the nature of the concern, with supporting evidence. Student Progress Service may invite you to a meeting as part of the investigation. The allegation will normally be investigated under the University’s Disciplinary Procedure. Students must avoid disclosing personal data of another person/s in their complaint unless they have been given permission by them to do so, and this is also submitted.

The Student Academic Appeals Procedure is for appeals against the decisions of the Boards of Examiners (excepting those relating to assessment irregularities), Personal Extenuating Circumstance (PEC) Committees, and sanctions imposed under Unsatisfactory Progress procedures. More information is available here: https://www.ncl.ac.uk/students/progress/Regulations/Procedures/appeals.htm.

Academic queries and appeals may only be made on the following grounds:

(a) Grounds for academic appeal following Board of Examiners Decisions:
- Personal Extenuating Circumstances (PEC) that you were unable to disclose in advance of the Board of Examiners meeting via a Personal Extenuating Circumstances (PEC) application, or were unable to provide evidence for at that time, or of which you were previously unaware
- Procedural irregularity on the part of the examiners
- Bias or prejudice on the part of an examiner or examiners.

(b) Grounds for academic appeal following PEC Committee Decisions:
- Procedural irregularity or other error on the part of the PEC Committee
- Bias or prejudice on the part of the PEC Committee.
(c) Grounds for academic appeal following an Unsatisfactory Progress Decision:

- Evidence which was not available or considered previously
- Procedural irregularity
- Bias or prejudice
- That the decision reached was perverse in that it was one which no reasonable person could have reached on the available evidence.

(d) Grounds for academic appeal following a DPD Request Decision:

- Evidence which was not available or considered previously
- Procedural irregularity
- Bias or prejudice
- That the decision reached was perverse in that it was one which no reasonable person could have reached on the available evidence.

NB: An appeal relates to the decision of the examiners and should not be used to raise general complaints about tuition or support over the length of your degree programme.

You are expected to make every effort to raise your assessment/progress query, in writing, with the School directly concerned in the first instance. Impartial advice on both procedures may also be sought from the Student Progress Service. Assistance with submitting a formal complaint or an appeal may be sought from the appropriate officer of the Student Union, from the Student Advice Centre, or from a Personal Tutor.
Section E: Assessment and Feedback

Coursework Submission

University policy states that all submission deadlines must be published by the end of the second teaching week each semester. These will be published on the NESS system. You should take note of these deadlines at the beginning of each semester and make sure you carefully plan a schedule of how you will work towards the completion of each assignment.

Across the University, Schools and module leaders ask students to submit their coursework in a variety of ways (i.e., through Blackboard, NESS, or in hard copy). Before submitting, make sure that you know exactly how to submit and if you need to submit multiple copies. All PHY coded modules will have this information provided on the relevant module entry of the Blackboard support site. A coursework header sheet printed from NESS should be attached to coursework that is submitted in hard copy.

Only the Degree Programme Director has the authority to approve changes in coursework submission deadlines once they are published. If a deadline does change, you will be given sufficient notice and a reason for the change.

More information about University policies on coursework submission and the return of feedback is available here: http://www.ncl.ac.uk/ltds/assets/documents/qsh-assmt-assessedwork-policy.pdf.

Plagiarism

The University makes routine plagiarism checks on all appropriate pieces of work. This means that your coursework assessments will be submitted to an electronic text matching software system (directly, by you, or by a member of staff). Your work will be checked against a database of web pages, academic articles and books, and other students’ papers (from Newcastle and other universities), and any matches between your work and those other sources highlighted. Matching text does not necessarily mean that you have plagiarised, since you may have correctly referenced text from other source.

When you submit your assignments, you will be told how you need to submit to ensure they are checked. There are some file restrictions and file size restrictions, and you will be given guidance on what you can and cannot submit. You should always ask your module leader if you have any questions about a specific assignment.

The University takes plagiarism and academic conduct very seriously, and you are expected to know how to reference other sources correctly.

Late Submission of Assessed Work

The University has a set policy for late submissions, so you should be careful to submit all assessments well in advance of the deadline. If work is submitted within seven calendar days of the deadline, it will be capped at the pass mark (40 for undergraduate modules coded for example PHY1XXX, PHY2XXX or PHY3XXX and 50 for Stage 4 modules coded for example PHY8XXX). If you submit a piece of work more than seven days after the deadline, it will receive a mark of zero.
There are two circumstances in which late work will always receive a zero: if your piece of work is marked on a non-discriminatory marking scale (i.e. pass/fail or merit/pass/fail), or if you are submitting work for a re-sit assessment.

There may be pieces of coursework for which no late work is allowed. You will receive prior notification in these instances.

If you have a valid reason for submitting your work late (e.g. illness), you should submit a PEC form; there is more information on this form earlier in the handbook (page 16). Computer failures and transportation problems are not considered a legitimate excuse for late submission (unless IT Services has confirmed a University-wide computer failure).

Examinations

University exam period dates are published several years in advance: (https://www.ncl.ac.uk/regulations/docs/term-dates/#currentandfutureyears).

For 2019/20, Semester 1 exams will fall between 13 January and 24 January; Semester 2 exams will fall between 18 May and 5 June. Re-sit exams will take place from 17 August to 28 August. Please note that examinations are scheduled on Saturdays during the main periods. You are expected to be available for examination at the University during all of the examination periods.

The University publishes a provisional exam timetable about two months in advance, so that you can check there are no clashes between your modules. A final exam timetable is published about one month before the exam period. It is your responsibility to check the timetable (dates, times and locations of your exams). You must also read and understand the Rules for University Examinations, which explain how you are expected to behave during exams: https://www.ncl.ac.uk/exams/rules.

The University has a calculator policy for examinations. Students can only use three models of calculator (Casio FX-83GTPLUS, Casio FX-85GTPLUS, or Casio FX-115MS – or any discontinued models of the same calculator i.e. any calculator model that begins with ‘Casio FX-83’, ‘Casio FX-85’ or ‘Casio FX-115’).

When you are revising for your exams, you will almost certainly find it helpful to obtain copies of recent examination papers; these are available on the Blackboard student community. Sample papers should be provided by the lecturer for new modules.

If you have a disability or specific learning difficulty, you may require special arrangements for your exams. On submission of relevant medical documentation, for example, you may be allowed extra time and/or an alternative venue. If you think that this may apply to you, you should contact Student Wellbeing as soon as possible to discuss any special requirements: (www.ncl.ac.uk/students/wellbeing/disability-support/support/examinations.htm).

Examinations will generally take place on campus, although there are exceptions to this rule. International students, for example, may apply to take a re-sit exam in their home countries. More information is available from the Exams Office and in the University Policy on Off-Campus Assessments: https://www.ncl.ac.uk/exams/overseas/.
Feedback on Assignments

You will receive feedback on all of your coursework. University policy states that feedback on coursework must be returned within 20 working days (Monday-Friday, not including Bank Holidays or University closure days); general exam feedback must be returned 20 working days from the end of the exam period. If feedback is going to be returned late for any reason, you will be informed in advance and told when you should expect to receive your feedback.

You will receive feedback in a variety of ways: written on your work, given verbally in lectures or tutorials, or provided on Blackboard or NESS. Feedback may come from lecturers, from your student peers, or from yourself. Learning to give yourself feedback is an important skill that you will continue to use after University. You are expected to use your feedback by looking at your work, the criteria for the work and the feedback comments, and thinking about how you can improve in future assessments.

Feedback on exams may be given in the form of general feedback to the entire cohort. This feedback is focused on identifying what made good answers and poor answers on the exam and providing feedback on exam strategies. You do have the right to request individual feedback, and students wishing to do so should complete the online feedback request form circulated by the School within one week of marks being released.

Feedback on Examinations

Individual feedback is made available to Physics students following publication of examination results. This can be of two kinds:

- Written feedback. This approach will generally be followed in modules which are taught to a wider cohort of students
- Verbal feedback in a meeting with the module leader which also includes the opportunity to view your marked examination script. This may be used for modules taught exclusively to Physics students and this document describes how this type of feedback will be made available

If you wish to receive feedback following publication of your examination marks:

- You may ask for feedback by completing the feedback request form. Details of how to access the form will be given when marks are returned. Requests for individual feedback should be made during the week following release of the examination marks. We are sorry that we will not be able to accept later requests
- You will receive a reply, either with your written feedback, or giving a room, date and time for the feedback. You will be able to view your marked examination script and talk to the module leader about this. If the module leader is not available, the second marker will deputise
- Under normal circumstances, this meeting will be arranged in the week following your request (for semester one exams) or in induction week of the following year (for semester two exams)
- In order to specifically support students taking resit papers for semester 2 examinations, we will send written feedback by email (as the face to face meeting isn’t possible outside term time). This should also be requested as above
- You will be able to view your own marked script and will have an opportunity to talk individually with the module leader. We will not discuss the allocation of marks to sub-questions, but will explain the detailed marking criteria used
- No remarking of scripts is possible during this feedback meeting
• If you are unable to attend (e.g. through recorded sickness) we will make reasonable efforts to accommodate this

**Marking Criteria**

All undergraduate work is marked on a scale ranging from 0 to 100. This is fully explained in the SAgE Faculty Marking Criteria document which can be found at Appendix Three.

**Marking and Moderation Processes**

You should have absolute confidence that the marks you receive are fair and consistent across markers. All assessments that are worth a significant part of your final mark are reviewed in advance so that the instructions are clear and the questions are reasonable for a student at your level.

Depending on the assignment, your work may also be moderated. This means that a second marker will look at the mark and feedback given by the first marker and ensure that it is fair and accurate. Several different processes for moderation may be used, including sampling (looking at a sample of pieces of work across grade boundaries) and second marking (where a second marker looks at every piece of work).

All marks that are returned to you are provisional and subject to review and potential moderation prior to the final Board of Examiner meeting. Each taught programme of study (undergraduate and postgraduate) has a Board of Examiners (BoE) which is responsible for decisions about the outcomes of assessment of students on the programme. The BoE has a substantial degree of discretion. This means that it may award a degree classification higher than that determined by the marks alone. The Board may also, in certain circumstances, deem individual students to have passed particular modules in which they have obtained a fail mark.

The University policy on moderation processes is available online at: http://www.ncl.ac.uk/ltds/assets/documents/qsh-assmt-modscal-pol.pdf.

**How Assessment Affects Your Progress**

Your progress within your programme depends on your assessment marks, as explained in your degree programme regulations. The simplest way to proceed from one Stage to another is to pass all credits in a given Stage. Should you fail any number of modules, you are allowed the opportunity to re-sit these examinations in August. (Re-sit exams are normally held in August, though students may choose to take a year out from the University and re-sit at the next normal sitting during the academic year.) Students are allowed one re-sit attempt. If you satisfy the examiners with your performance on the re-sit, you will have a pass mark (40 for undergraduate, 50 for postgraduate) recorded for that module.
Assessment Irregularities and Disciplinary Procedures

As part of the Student Charter, you have agreed to follow University procedures and to maintain the highest standards of behaviour. The University is committed to ensuring that assessments are fair for all students, and it has established a procedure for dealing with situations in which one student uses improper means to ‘get ahead’ on an assessment. These situations are called assessment irregularities, and they may include (but are not limited to) the following:

- Copying from or conferring with other candidates or using unauthorised material or equipment in an examination room
- Impersonating or allowing another to impersonate a candidate
- Introducing examination scripts into the examination process otherwise than in the course of an examination
- Permitting another student to copy work
- The falsification (by inclusion or suppression) of research results
- Plagiarism, defined as the unacknowledged use of another person’s ideas, words or work either verbatim or in substance without specific acknowledgement. It is also possible to plagiarise yourself if you submit the same work for multiple assignments or do not acknowledge ideas or words that you have submitted previously
- Procurement of assessment material

The University’s assessment irregularity procedure in full can be found here: https://newcastle.sharepoint.com/hub/ltds/lt-essentials/Pages/assessmentirregularities.aspx.

More generally, at Newcastle we value high standards of academic conduct. Conduct is an important part of maintaining and developing our reputation. Good academic conduct reflects the values which underpin academic life, such as honesty, integrity, a shared community of ideas and respect for others’ work. The Right-Cite for Good Academic Conduct (www.ncl.ac.uk/right-cite/) provides a detailed account of the issues governing academic conduct and gives you access to a range of resources. There is also information on appropriate style and referencing guides here: libguides.ncl.ac.uk/referencing.

You can expect to receive a briefing on academic conduct and the referencing guidelines that you are expected to follow. You should also be told what plagiarism detection software may be used. You are in turn expected to do the following:

- Maintain high standards of academic conduct
- Show a commitment to academic honesty in your work
- Be familiar with and apply the guidance provided on proper referencing and good academic practice
- Avoid plagiarism

The Student Disciplinary Procedure will apply to any student who is alleged to have breached the University’s code of conduct. More information is available here: https://www.ncl.ac.uk/students/progress/Regulations/Procedures/disciplinary/.

This procedure applies to any student who breaches academic codes of conduct as well as non-academic situations (disruption, anti-social behaviour, theft and fraud, violent behaviour, criminal offences, etc.).
Recognition of Prior Learning and Credit Transfer

The University acknowledges that some students will start their time at Newcastle with prior experience – either of studying at other universities or from work. We want to recognise students’ past work appropriately, so you may be able to apply for Recognition of Prior Learning (if you have credits from a non-UK university or relevant experience) or credit transfer (credits from a UK university).

If your application for RPL or credit transfer is successful, you will not have to take the module (or modules) identified in your application. However, any previous marks (at another University) will not be counted toward your Newcastle degree classification. If you receive credit transfer, you will be considered to have ‘passed’ the module; if you receive RPL, you receive no credit for the module but will be exempt from taking it. It may not always be to your benefit to apply for RPL or credit transfer, since it means that you will have fewer modules that count toward your final degree classification (meaning that each one carries a greater weight).

If you successfully apply for RPL or credit transfer, you could gain permission to study modules outside the degree programme regulations or additional optional modules, with DPD approval, up to a full credit load. If you do so, these modules will count toward your final degree classification. The University policy is available here: [http://www.ncl.ac.uk/ltds/assets/documents/qsh-ct-rpl-pol.pdf](http://www.ncl.ac.uk/ltds/assets/documents/qsh-ct-rpl-pol.pdf).
Section F: Student Representation and Feedback

Overview

The University values your opinion very highly – we want to know when things are going well and when you think things can be improved. We have a number of ways of trying to get student feedback, including module evaluations and student participation on committees. It’s important that you take these questionnaires and opportunities seriously and give your honest opinion. It is also important that you provide specific evidence of what’s going right or not so well – it helps us when we know more specifically what is going on – and that you are respectful in the types of comments that you provide.

The University explanation of how it works in partnership with students is available in the Policy on Student Representation:
https://newcastle.sharepoint.com/news/Pages/Student-representation-at-Newcastle-University.aspx

Stage Evaluations

At the end of each semester, you will be asked to complete a Stage-level evaluation for your degree programme. These evaluations are used to find out about your experiences, assess the positive features of a programme, and identify anything that could be improved in the future. Evaluations will be tailored so that they are appropriate for the specific Stage.

It’s important to us in these evaluations that you are specific about what is positive and/or negative, and that you are realistic. It also helps if you suggest solutions – we will take these seriously!

You will receive a link to the Stage-level evaluations through email, and you can then complete the survey online and anonymously. You will find links to your evaluations in the ‘My EvaSys’ panel in Blackboard (on the My Institution page) – these links only appear when there is an evaluation open and ready for you to complete.

National Surveys

In addition to module evaluations, which focus on specific modules, the University also uses several external surveys to gauge your overall opinion of your time at the University. The key surveys are:
National Student Survey (NSS) - The NSS contributes to public accountability, helps to inform the choices of prospective students, and provides data that allow informed decisions to be made to enhance the UG student experience. The NSS typically runs February to April annually. It includes all full-time and part-time UK, EU, and international final year undergraduate students studying at Newcastle main campus and Newcastle University London (NUL), including eLearning students based in the UK. The University runs a Newcastle Student Survey through EvaSys designed for students who meet the basic NSS requirement, but are based outside of the UK at Newcastle University Medicine Malaysia (NUMed), Newcastle University International Singapore (NUIS), or are non-UK based eLearners. The NSS excludes incoming and exchange students. See: https://www.officeforstudents.org.uk/advice-and-guidance/student-information-and-data/national-student-survey-nss/ for more information.

Previous year’s NSS results are available on the Planning Office website: https://newcastle.sharepoint.com/hub/planning/Pages/nationalstudentsurvey.aspx

International Student Barometer (ISB) – The ISB tracks and compares the decision-making, expectations, perceptions, and intentions of international students from application to graduation. It enables us to make informed decisions to enhance the international student experience and drive successful recruitment and marketing strategies. The ISB normally runs in late October until late November. It includes all full-time and part-time EU and international undergraduates, postgraduate taught, and postgraduate research students at Newcastle main campus and NUL students. Study abroad and exchange students are included in the ISB. See http://www.i-graduate.org/services/international-student-barometer/. Previous year’s results are available https://internal.ncl.ac.uk/planning/performance/isb.htm.

For more information about our student opinion surveys go to: http://www.ncl.ac.uk/ltds/student/opinion/.

Official invitations from the University asking you to participate in national surveys will be sent to you from newcastlestudentsurveys@ncl.ac.uk.

Academic Student Representation

Student representatives are volunteers who will represent all students on their programme at various Committees (further information will be emailed to you after Induction Week). Student representatives are a crucial link between the student body and staff, since they find out what other students are thinking and can work through agendas to help improve the student experience.

Course representatives will participate in the Student-Staff Committee, which is chaired by a student and has a student secretary. Even if you’re not a student rep, you will be able to contribute to the agenda – tell your rep what you think should be discussed! – and read the minutes of the meeting afterwards. Course representatives are also asked to attend the Learning, Teaching and Student Experience Committee and the Board of Studies, which oversee teaching activities for the Physics programmes.

School representatives are appointed by the Student Union to represent their School at the Faculty Education Committee (FEC). These reps take opinions from the student body to a bigger Faculty committee and have a direct voice in decisions that are being made across the Faculty. The Student Union provides training for course representatives, chairs and secretaries – more information is available here: https://www.nusu.co.uk/yourvoice/reps/.
Section G: Ensuring the Quality of Your Degree

Mechanisms for Ensuring the Quality of Your Degree

The University is responsible for ensuring the quality and standards of all academic awards made in its name. You should have confidence that there are a number of people – across the University, and outside the University – who review your degree programme and ensure that it is up-to-date, consistent in its treatment of students, appropriate in its forms of teaching and assessment, and of the highest standard. The key mechanisms are described below:

Annual Monitoring and Review (AMR) – Every year, programmes are asked to comment on what went well and what could be improved (and to provide evidence). Each programme is also required to develop an action plan that lists new projects and activities to improve the degree programme. This AMR is reviewed at Faculty level each year. See the University policy for more information: http://www.ncl.ac.uk/ltds/assets/documents/qsh-amr-policy.pdf.

Learning and Teaching Review (LTR) – Approximately every six years, each School or subject area is reviewed by a panel of University staff and one external member who is a discipline-specialist. This review examines the teaching and learning process and speaks with both students and staff about their experiences of the programme. For more information, please see: http://www.ncl.ac.uk/ltds/assets/documents/qsh-ltr-policy.pdf.

External Examining – Each programme will have at least one external examiner, someone who works at a different University or in industry. The function of external examiners is to assist the University by providing assurance in their expert judgement that the standards of all awards at Newcastle are at least comparable to those in similar subjects in other universities in the UK and with relevant external referents. External examiners are asked to review programme aims and learning objectives as well as assessment questions and feedback. In order to help ensure the quality of the education it provides and the maintenance of the standards of its awards, the University places significant reliance on its external examiners by:

- Requiring them to provide independent and impartial advice, as well as informative comment on the University’s standards and on student achievement in relation to those standards
- Drawing upon their professional advice and expertise and giving full and serious consideration to their reports

For further information, see: http://www.ncl.ac.uk/ltds/governance/examiners/.

You should not contact external examiners directly, but you may be asked to meet with them when they come to visit the University. You can also engage with the process through which the University considers and responds to external examiners by participation in Boards of Studies, Student Staff Committee, and Faculty Education Committee.

You can engage directly with LTR by volunteering to meet with the panel (if there is an LTR while you are a student) or by volunteering to serve as a student panel member for an LTR in another School. You can engage with AMR and external examining through the student representation system and by participating in School and Faculty committees.
Changes to your programme – The University recognises that students invest time and personal effort in their studies and need timely dialogue and clarity of options when changes occur. Your School will act transparently and enter into dialogue with students to identify options and minimize the impact on students affected by changes to programmes. For further information, see: http://www.ncl.ac.uk/ltds/assets/documents/qsh-progapp-majminchanges-policy.pdf.
Section H: Resources

Provision of Equipment

Students are expected to provide themselves with writing materials (pens, pencils, A4 paper, and ruler) for note-taking in lectures, tutorials and practical classes.

You will find it necessary to buy some textbooks, either new or second-hand. For others, it may be sufficient to make reference to library copies. In most instances, lecturing staff will give guidance about the relative importance of the various texts, indicating which should be regarded as essential purchases.

University Library

The University Library Service provides access to a wide range of resources, services and study spaces as well as professional expertise to help you to be successful in your studies and research. The Robinson Library is open 24 hours a day during term-time, and the Walton and Law libraries are open until late.

The libraries house over 1 million books, subscribe to over 26,000 journals and provide access to more than 6 million ebooks. Library Search (libsearch.ncl.ac.uk) can be used to locate books, ebooks, journal articles and a lot more information using a single search. High demand items can be found in the Student Text Collection (STC) and are bookable online. The Robinson Library also houses the Special Collections (http://www.ncl.ac.uk/library/specialcollections/), which are made up of rare and historic books, manuscripts, maps and illustrations.

The Library’s Subject Guides (http://www.ncl.ac.uk/library/subject-support/) bring together tailored, subject-specific information, resources and databases and are the best place to start your exploration of the Library’s resources for your specific discipline.

The libraries are excellent places to study. They have a range of silent and quiet areas plus group and collaborative learning spaces. They collectively house over 560 computers. Wi-Fi is also available so you can use your own devices or borrow one via our Laptop Loan Scheme.

The Library online study space monitor (http://www.ncl.ac.uk/library/about/study-space-availability) is a good way of checking availability.

Library Staff are available at information points and service desks to help you to find the information you need. They also offer workshops and one to one consultations to help you improve your information skills. Alternatively you can use our online Library Help service 24/7 (libhelp.ncl.ac.uk) to access support no matter where you are.
**Academic Skills Kit (ASK)**

The Academic Skills Kit is an online resource which brings together the range of academic skills development provision across Newcastle University into a one-stop website. Provision includes information literacy, revision strategies, academic writing, time management and maths and statistics. It signposts specialist support for, for example, international students or those with Specific Learning Difficulties. It also hosts a range of self-access online resources with advice and tips on various aspects of study.

Please visit [www.ncl.ac.uk/ask](http://www.ncl.ac.uk/ask).

**Writing Development Centre**

The Writing Development Centre (WDC) offers tuition, guidance and support for students wishing to improve their writing skills for study purposes. Help is available with the following:

- Understanding assignment questions and marking criteria
- Critical thinking, critiquing and reviewing literature
- Planning and structuring writing (incl. paragraphing)
- Academic writing style (incl. fundamentals of grammar)
- Avoiding plagiarism
- Managing time, work and writing (incl. writers block and procrastination)
- Exams and revision (excluding take-home exam papers, except in general terms)
- Presentations and posters

The WDC has a blog to help you keep track of study tips and ideas about writing: [blogs.ncl.ac.uk/academicskills/](http://blogs.ncl.ac.uk/academicskills/).

The WDC runs a series of lectures, seminars and workshops throughout the academic year. Some are open to all students; others have been developed for specific programmes or modules. The WDC also has resources to help improve your writing, available on-line.

The WDC also offers a one-to-one support service. You can have an individual consultation with an academic writing tutor to discuss any difficulties you may have with writing, seek feedback on your written work, or gain a better understanding of academic writing conventions and the standards expected at University. Appointments and workshops can be booked online via the WDC website [https://www.ncl.ac.uk/library/subject-support/wdc/](https://www.ncl.ac.uk/library/subject-support/wdc/).

**INTO Newcastle In-Sessional English**

The INTO Newcastle In-Sessional team can provide information on:

- The University English Language Assessment (UELA)
- Free academic English language classes for Newcastle students whose first language is not English

The in-sessional language programme can provide both non-credit-bearing support and credit-bearing modules.

More information about the In-Sessional programme is available from the INTO website: [www.ncl.ac.uk/students/insessional/about/insessional.htm](http://www.ncl.ac.uk/students/insessional/about/insessional.htm).
**Maths-Aid**

Maths-Aid is a drop-in centre providing a free and confidential service to all students of Newcastle University on all aspects of mathematics and statistics including:

- Preparation for exams
- Developing problem solving and numerical skills
- Advice on correcting mistakes and overcoming problems in everyday academic work
- Help in understanding lecture notes
- Advice on graduate numerical skills tests

More information is available from the website: [https://internal.ncl.ac.uk/ask/where-to-go/maths-aid](https://internal.ncl.ac.uk/ask/where-to-go/maths-aid)

**Computing Facilities**

You are encouraged to use computing facilities for word-processing, data handling and analysis. The use of computers will also be incorporated into the teaching programmes for most modules and you will usually prepare and submit coursework electronically. You can find available computers on campus using the link: [m.ncl.ac.uk/itservice/](m.ncl.ac.uk/itservice/).

If you have any questions about computing facilities or software, including email and printing, please check the IT Service information available to students: [https://www.ncl.ac.uk/itservice/studentitservices](https://www.ncl.ac.uk/itservice/studentitservices).

**Careers Service**

The Careers Service is situated in King’s Gate, Level 1.

Opening hours: Monday, Tuesday, Thursday, Friday 9:00 to 5:00  
Wednesday: 10:00 to 5:00  
Term time drop-in sessions: Monday – Friday 11:00 to 16:30

Whether you’re seeking a graduate career, doing further study, or starting a business, the Careers Service can help you realise your potential. We provide careers advice and support while you’re studying, and for three years after you graduate. You can drop in to speak to us during the week, or visit our website [http://www.ncl.ac.uk/careers/](http://www.ncl.ac.uk/careers/) to start your career planning journey.

We can help you to:

- plan your career - [https://www.ncl.ac.uk/careers/planning/](https://www.ncl.ac.uk/careers/planning/)
- market your skills and experience in CVs and job applications and LinkedIn profiles - [https://www.ncl.ac.uk/careers/applications/](https://www.ncl.ac.uk/careers/applications/)
- build up your contacts and networks - [https://www.ncl.ac.uk/careers/makingcontacts/](https://www.ncl.ac.uk/careers/makingcontacts/)
- develop enterprise skills or start a business
- find placements, internships or work experience - [https://www.ncl.ac.uk/careers/workexperience/](https://www.ncl.ac.uk/careers/workexperience/)
- find jobs and postgraduate courses

If you’d like to work for yourself, START UP can help you to develop opportunities, explore ideas, work freelance or start your own business. We offer help at every stage, from pre-idea to launch and beyond: [www.ncl.ac.uk/careers/startup](www.ncl.ac.uk/careers/startup)
**Health and Safety**

The University has a duty to keep you healthy and safe whilst you are studying with us. The Occupational Health and Safety Service (OHSS) is a central support service which helps Schools and Institutes to meet their legal requirements under health and safety legislation. The website address is [www.ncl.ac.uk/ohss/](http://www.ncl.ac.uk/ohss/).

The University and each School or Institute have a health and safety policy which provides important information on how health and safety is managed and consists of three sections:

- **Statement of Intent** - a commitment to protect the health and safety of all staff and students signed by the Head of Unit;
- **Responsibilities** - a summary of the health and safety responsibilities for each level of staff and students. Students are expected to be responsible for their own actions and any activities which may adversely affect staff, fellow students or visitors;
- **Arrangements** - this is usually the largest part of the policy and contains detailed information on how the School or Institute manages health and safety locally. For example it will tell you about the arrangements for health and safety training, risk assessments and computer workstation assessments. Students are encouraged to dip in and out of this part of the policy as needed.

The Health and Safety policy is an important document and students should make sure they have or know where to find a copy of their School or Institute policy.

If students need any health and safety advice or information they should speak to their academic tutor in the first instance. In addition each School and Institute has a School Safety Officer (SSO) who is an invaluable source of local advice. The SSO for the School of Mathematics, Statistics and Physics is Christine Wright who is based in the School office, Third Floor, Herschel Building.

The University is legally required to carry out risk assessments for all its work activities. A risk assessment is a careful examination of each work activity to decide what could cause harm and to decide if the current precautions are sufficient. Students may be asked to complete a risk assessment for an individual project or work activity as part of their academic studies. Standard operating procedures are also sometimes used in conjunction with risk assessments to give step by step guides to carrying out work activities safely.

Each Faculty will provide a health and safety induction and training for students. The precise format and number of safety courses will be decided by each Faculty. Students are expected to attend health and safety training and may not be allowed to carry out certain high risk activities until trained.

Things sometimes go wrong whilst studying. Any accidents or near misses must be reported as soon as possible to the staff member in charge of the session/area and also to your School office. We will not blame individuals; please do not try to hide mistakes or cover up when things go wrong. We want you to report accidents and near misses so that we can all learn from our mistakes and take steps to make sure they do not happen again. In an emergency please contact the Security team 24 hours a day on 6666 or for non-emergencies on 0191 208 6817 or security@ncl.ac.uk. If you see any physical defect on campus these can be reported to the Estates Support Service helpdesk on 0191 208 7171 or ess-helpdesk@ncl.ac.uk.
**Physics Health and Safety Matters**

It is extremely important that we provide as safe an environment as we possibly can. With this in mind we urge all students to be as safety conscious as they can and to follow all safety training and instructions given.

You are reminded that as well as the University having a responsibility for your health and safety, you also have responsibilities. Most notably these are to follow any instructions and training you receive and to wear personal protective equipment (PPE) when required to do so. You must not remove or interfere with any safety device which is provided for your safety. If you see anything which is damaged or in a dangerous condition you must report this as soon as possible to the person in charge of safety for that area/equipment or to the School Safety Officer (see above).

Access to the Physics teaching laboratories is SMART card controlled. To gain access to the labs your card must be authorised, and this can only be done once you have read all of the health and safety information and completed the relevant electronic form available on the Physics website.

The Physics health and safety policy can be found on the Physics website: [http://www.ncl.ac.uk/mathematics-physical-science/students/](http://www.ncl.ac.uk/mathematics-physical-science/students/).
Section I: Additional University Contact Information (Not Provided Above)

### Additional Contact Information

<table>
<thead>
<tr>
<th><strong>Chaplaincy</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Chaplaincy is a team of chaplains working together, appointed by faith communities, recognised by the University and affiliated to the Student Wellbeing Service. The Chaplaincy is committed to working with students and staff of different faiths and none and to making the University a place of religious tolerance and respect.</td>
<td></td>
</tr>
<tr>
<td><strong>Location:</strong> 19/20 Windsor Terrace</td>
<td><strong>Telephone:</strong> 0191 208 6341</td>
</tr>
<tr>
<td><strong>Email:</strong> <a href="mailto:chaplaincy@ncl.ac.uk">chaplaincy@ncl.ac.uk</a></td>
<td><strong>Website:</strong> <a href="https://www.ncl.ac.uk/students/wellbeing/about/chaplaincy.htm">https://www.ncl.ac.uk/students/wellbeing/about/chaplaincy.htm</a></td>
</tr>
</tbody>
</table>

| **Newcastle University IT Service (NUIT) – The University’s Central Computing Service** |  |
| IT Services provides the University’s IT infrastructure (networks, servers, etc.) and provides most of the computer services used by staff and students (systems, software and computers for students). |  |
| **Location of IT Service Desk:** Old Library Cluster (Monday to Friday 9.00 – 5.00) | **Telephone:** 0191 208 5999 |
| **Email:** it.servicedesk@ncl.ac.uk | **Website:** [www.ncl.ac.uk/itservice/](http://www.ncl.ac.uk/itservice/) |

| **International Office** |  |
| The International Office provides information and advice on: |  |
| • Newcastle programmes and how to apply |  |
| • English language requirements |  |
| • The equivalence of overseas qualifications |  |
| • Erasmus/Study Abroad information |  |
| It also provides an orientation welcome programme and airport collection service. |  |
| **Location:** King’s Gate | **Telephone:** 0191 208 3333 |
| **Email:** international.office@ncl.ac.uk | **Website:** [www.ncl.ac.uk/international/](http://www.ncl.ac.uk/international/) |

| **Language Resource Centre** |  |
| The Language Resource Centre provides materials and facilities for the research, learning, teaching and practice of over 50 foreign languages and is available to all students and staff of the University. |  |
| **Location:** Old Library Building | **Telephone:** 0191 208 7490 |
| **Email:** language.resource@ncl.ac.uk | **Website:** [www.ncl.ac.uk/langcen/](http://www.ncl.ac.uk/langcen/) |

<p>| <strong>Nightline</strong> |  |
| Nightline is the confidential listening and information service run for students by students. |  |
| <strong>Telephone:</strong> 0191 261 2905 – 20:00-08:00 | <strong>Email:</strong> <a href="mailto:nightline@ncl.ac.uk">nightline@ncl.ac.uk</a> |
| <strong>Website:</strong> <a href="https://www.nusu.co.uk/support/nightline/">https://www.nusu.co.uk/support/nightline/</a> |  |</p>
<table>
<thead>
<tr>
<th>Student Union</th>
</tr>
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<tbody>
<tr>
<td><strong>Location:</strong> Student Union, King’s Walk</td>
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<tr>
<td><strong>Telephone:</strong> 0191 239 3900</td>
</tr>
<tr>
<td><strong>Email:</strong> <a href="mailto:union.society@ncl.ac.uk">union.society@ncl.ac.uk</a></td>
</tr>
<tr>
<td><strong>Website:</strong> <a href="http://www.nusu.co.uk/">www.nusu.co.uk/</a></td>
</tr>
</tbody>
</table>
Appendix One

Information for Stage 1 Students

Introduction

A note from the Senior Tutor for Physics

Welcome to the Newcastle Physics Programmes. I am the Senior Tutor and will be happy to offer advice and help on any aspects of module choices, examinations and assessment and other problems related to your progress and welfare which you may encounter during your study.

The Mathematics, Statistics and Physics School Office (Third Floor, Herschel Building) or your personal tutor will be your first points of contact if you experience difficulty or need advice. The Degree Programme Director (Dr Angela Dyson) will be another important point of contact, but I hope and expect all of your teaching and support staff to be helpful and accessible.

For your first year at university things will seem very strange and, perhaps, a little daunting at first. Many people feel homesick during the first term and sometimes wonder if University life is right for them. It is important to recognise that you are not the only one who is feeling this way and that many of your colleagues probably have the same anxieties, even if on the face of it they seem to be without worries. Most students need to be a few weeks into the second term before they feel at home. A most important aspect to recognise straight away is that this is not school. At university you will be treated as an adult and it is assumed that you take responsibility for your progress through the course. Apart from a few special circumstances you will not be set much work by the staff and you will not be forced to learn. The work of the course is quite rightly challenging, both in terms of the level and quantity of the material. This is because it is a worthwhile course, preparing you for a life where you can exercise the skills and understanding required for a professional career. The training, and more importantly the self-training, you gain during your time at university will be invaluable. As no-one is pushing you it is easy to fail to recognise at the start of the course just how much work is to be done. It is vitally important that you keep on top of your tasks and do not let them build up. Get assignments and reports completed quickly. Go over your lecture notes soon after you have taken them. If you do not understand them read round the subject in text books and if you still have problems go and see the lecturer concerned. Solve problems as they arise, do not push them into the background and hope they will go away - they will not.

This handbook has been prepared with the aim to give you all the information you need to know about this year’s work. You should read and regularly refer to these documents as they will help you understand how the University works and to inform you of policies relating to your course of study. Please ensure that you come along to the appropriate events in the Induction Week timetable. During this week I hope to meet with you all and wish you a warm welcome.

Professor Ian Moss

Senior Tutor for Physics
Induction Week

Your first week at University is dedicated to induction events which will ensure you receive all the necessary information you will need to study successfully at Newcastle University. You will receive general information about the course and modules you will take and the facilities available to you and you will also be given the opportunity to meet with your Degree Programme Director and Personal Tutor.

By the end of Induction Week you should have:

- Registered fully on the Student Self-Service Portal (S3P)
- Been issued with a University SMART card
- Attended all the sessions on your Induction Week timetable
- Read the appropriate health and safety information and completed the electronic safety declaration to give you access to the Physics teaching labs
- Signed the student contract and submitted it to the Mathematics, Statistics and Physics office

Things You Are Expected To Do

The list below is an essential guide to what you must do, as a bare minimum, to ensure adequate progress through Stage 1 of your course.

- Attend all lectures and practical classes. Experience shows that students who do not attend often perform poorly in exams. Your attendance at timetabled sessions will be monitored
- Attend all tutorials classes and make good use of them. This is the time you can help to clear up any misunderstandings you may have about parts of the course
- Keep up to date by attempting all the tutorial examples on each tutorial sheet
- Take good notes - for example, write down the key points on what lecturers say as well as what is written on the board
- Hand in all assignments and coursework on time
- See your tutor regularly
- Report all difficulties which affect your performance to your tutor
- Read, and be familiar with, this Handbook
- Complete a Student Notification of Absence form via the S3P system ([s3p.ncl.ac.uk/login/index.aspx](http://s3p.ncl.ac.uk/login/index.aspx)) if you are absent from any course element for any reason and attach evidence where appropriate
- In the event of any circumstance (e.g. health or family) which will have affected your ability to study, submit coursework or examination performance, you should complete a Personal Extenuating Circumstances (PEC) form
- Check your University e-mail account regularly
- Update any change in your local or home address on the S3P system ([s3p.ncl.ac.uk/login/index.aspx](http://s3p.ncl.ac.uk/login/index.aspx)) immediately
Stage One Course Components

Problem Classes and Tutorials
During Stage 1 of the course you will be required to attend problems classes, drop-in sessions and small group tutorials. These will be led by module leaders, a tutorial leader or your own personal tutor. These sessions provide an opportunity to work through parts of the course with which you or your colleagues may be having difficulty. They are usually based around the tutorial problems set for particular lecture courses. These sessions can be a very valuable support, but you will also be expected to organise your own time to fulfil the coursework requirements for each module.

Laboratory Work
During the Stage 1 laboratory sessions, you will be required to carry out several projects and experiments in support of your lecture work. You should keep a logbook of your laboratory activities; this will be provided. In some cases you will be asked to write up your work in a more formal manner. You will be given a mark for your laboratory work. This mark will contribute to your final mark in your modules as well as forming a separate module assessment. A lab booklet will be provided which will outline any preparatory work that should be undertaken. Part of the lab module will include the teaching of MatLab and this tool will be used during lab sessions for data plotting and analysis. Reports can be written up using either Word or LaTeX scripting; with templates provided. If you have not used LaTeX before it is advised that you familiarise yourself with it at an early stage of semester one. Drop in sessions will be available prior to the report deadline for help with formatting, compiling etc.

Stage One Modules

All Stage one modules are compulsory.

Semester One

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY1021</td>
<td>Introductory Astrophysics</td>
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</tr>
<tr>
<td>PHY1022</td>
<td>Vibrations, Waves, AC Theory</td>
<td>10</td>
</tr>
<tr>
<td>PHY1030</td>
<td>Laboratory Physics 1</td>
<td>10</td>
</tr>
<tr>
<td>PHY1031</td>
<td>Introductory Calculus</td>
<td>15</td>
</tr>
<tr>
<td>PHY1032</td>
<td>Introductory Algebra: Complex Numbers, Vectors and Matrices</td>
<td>15</td>
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</table>

Semester Two

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY1020</td>
<td>Dynamics</td>
<td>10</td>
</tr>
<tr>
<td>PHY1023</td>
<td>Introductory Electromagnetism and Materials</td>
<td>20</td>
</tr>
<tr>
<td>PHY1025</td>
<td>Introductory Quantum Mechanics</td>
<td>10</td>
</tr>
<tr>
<td>PHY1029</td>
<td>Multivariate Calculus and Differential Equations</td>
<td>10</td>
</tr>
<tr>
<td>PHY1030</td>
<td>Laboratory Physics 1</td>
<td>10</td>
</tr>
</tbody>
</table>

Detailed descriptions of these modules including information detailing how it is assessed can be found in the module catalogue at [www.ncl.ac.uk/module-catalogue/](http://www.ncl.ac.uk/module-catalogue/)
Coursework Submission

All hard copies of coursework should be submitted to the Mathematics, Statistics and Physics Office on Level 3 of the Herschel Building by the stated deadline. Students should attach a header sheet to all coursework. Header sheets can be printed from NESS.

Printing coursework header sheets

To print a coursework header sheet from NESS follow the instructions below:

- Log into NESS using your University username and password ness.ncl.ac.uk
- Choose the appropriate module number from the modules listed along the top
- From the drop down menu box marked Coursework, choose the appropriate heading (e.g. Project/Assignment/Problem Solving Exercise etc)
- Choose Header Sheets from Coursework on the left hand menu bar
- Print one copy of the submission sheet (if you are submitting a group project all participants must print the submission sheet), attach it to your work and hand in to the School office where it will be scanned and a receipt emailed to you within 48 working hours.
Good Study Practices

Study Skills

You will soon notice that University programmes tend not to teach but to guide you through a self-learning experience. This may be very different from your previous education at school or college. It is your personal responsibility to pursue your studies, identify your difficulties and approach teaching staff to remedy them. Do not expect members of teaching staff always to check on your progress. You are expected, as mature adults, to monitor this yourself.

Your Tutor will always be happy to discuss study skills and self-learning techniques with you, but there are plenty of books about this available in the Robinson Library which you may find helpful. For up-to-date information and links to other resources within the University follow the links from the Library Home Page www.ncl.ac.uk/library/

Personal Time Management

A full-time undergraduate student will be studying 120 credits each of 100 hours total (i.e. taught hours plus private study time) over an academic year (including examinations) of 30 weeks, with teaching concentrated into 24 weeks.

You should therefore expect to:

- Spend approximately 40 hours per week in timetabled classes and private study throughout term-time, which will necessitate some evening and weekend work
- Spend part of the Christmas and Easter vacations in private study (including preparing set assignments for submission)

Mere attendance at timetabled lectures, tutorials and practicals (although compulsory) will not be sufficient to pass the examinations. Outside timetabled contact hours you should expect to invest a significant amount of personally timetabled private study. As general guidelines (which will need adaptation to circumstances), you should expect to study on your own as follows:

For lectures, in addition to each hour that you spend in a lecture it is advisable to spend a further hour to:

- Read over and understand your own lecture notes
- Consult textbooks (your own or in the library) for further explanation and reinforcement of the material
- Form a list of questions on points where you require further explanation ready for your next tutorial

For tutorials allow about 3 hours per hour of tutorial to:

- Attempt the tutorial exercises handed out by lecturers before tutorial classes
- Review similar examples and worked examples in textbooks
- Form a list of specific questions ready for your next tutorial
For practical classes allow about 30 minutes per hour of practical work to:

- Review the exercise completed, possibly with reference to your lecture notes or textbooks
- Prepare any reports or presentations required

Some of this private study time will be on a continuous basis and some will be more intensive for specific tasks (e.g. writing essays or reports) or final revision before examinations. Use the schedule of submission deadlines and assessment to plan your work. Ensure that you allocate sufficient time to each subject and also that you do not waste excessive time on any element (e.g. over-elaborating reports or presentations). As there is virtually no time for revision between the last lectures and examinations in the Semester system, you will need to work continuously throughout the academic year and you must keep up with all subjects. There is simply not enough time to "catch-up later". The importance of tutorial or assignment examples handed out by lecturers cannot be over-emphasised. In order to have a high probability of passing the examinations, you must attempt most tutorial or assignment examples.

**Keeping Lecture and Revision Notes**

Studying at university is a different approach to study as it requires analysis, synthesis and experience. This means that university students must develop the important skills of both recording and organising notes, handouts and other information. With some lectures, it is usually quite obvious what notes to take during the class, but you should also ensure that, in addition to the detail recorded, you are aware of the structure of the material. With descriptive subjects or in tutorial classes or in practical sessions it is sometimes more difficult to decide what to record and if you are in any doubt, consult your lecturers or tutors about this. With all subjects you are expected to supplement your class notes with additional notes made from textbooks or reference material consulted in the library. Remember that simply photocopying something (e.g., a worked solution to a tutorial example) does not mean that you have learned and understood it. It is often more cost effective to read and make your own notes!

You should organise your notes (lecture or class notes plus your own additional notes) systematically, keeping each module in a separate folder or file in sequence. It is very important to do this on a continuous basis, because there is no time between the last classes and examinations in which to do this and revise.
Appendix Two

Information for Returning Students (Stages 2, 3 and 4)

Introduction
A note from the Senior Tutor for Physics

Welcome back to the University. I am the Senior Tutor and will be happy to offer advice and help on any aspects of Stage 2, 3 and 4 modules, examinations and assessment and other problems concerned with your progress and welfare.

If you experience difficulty or need advice, the Mathematics, Statistics and Physics office (Level 3 Herschel Building) or your personal tutor will be your first points of contact. The Degree Programme Director (Dr Angela Dyson) will be another important point of contact, but I hope and expect all of your teaching and support staff to be helpful and accessible.

You should read this handbook as it will help you to understand specific details relating to your programme. Please ensure that you attend the appropriate meetings stipulated in the Induction Week timetable.

Professor Ian Moss

Senior Tutor for Physics
Stage Two Modules

All Stage two modules are compulsory.

Bachelor of Science with Honours in Physics/Master of Physics with Honours

Semester One

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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<tbody>
<tr>
<td>PHY2020</td>
<td>Principles of Quantum Mechanics</td>
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</tr>
<tr>
<td>PHY2022</td>
<td>Thermodynamics</td>
<td>10</td>
</tr>
<tr>
<td>PHY2026</td>
<td>Vector Calculus</td>
<td>10</td>
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<tr>
<td>PHY2027</td>
<td>Semiconductor Devices</td>
<td>10</td>
</tr>
<tr>
<td>PHY2028</td>
<td>Laboratory Physics 2</td>
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</tr>
<tr>
<td>PHY2032</td>
<td>Optics</td>
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Semester Two

<table>
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<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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<tbody>
<tr>
<td>PHY2021</td>
<td>Principles of Electromagnetism</td>
<td>10</td>
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<td>PHY2023</td>
<td>Statistical Mechanics</td>
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<td>PHY2024</td>
<td>Principles of Materials and Solid</td>
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<td></td>
<td>State Physics</td>
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</tr>
<tr>
<td>PHY2028</td>
<td>Laboratory Physics 2</td>
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<tr>
<td>PHY2029</td>
<td>Physics in the Modern World</td>
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<tr>
<td>PHY2031</td>
<td>Differential Equations, Transforms and Waves</td>
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Bachelor of Science with Honours in Theoretical Physics/Master of Theoretical Physics with Honours

Semester One

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credit Value</th>
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<tr>
<td>PHY2020</td>
<td>Principles of Quantum Mechanics</td>
<td>10</td>
</tr>
<tr>
<td>PHY2022</td>
<td>Thermodynamics</td>
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<td>PHY2026</td>
<td>Vector Calculus</td>
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<td>PHY2027</td>
<td>Semiconductor Devices</td>
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<tr>
<td>PHY2032</td>
<td>Optics</td>
<td>10</td>
</tr>
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<td>PHY2034</td>
<td>Computational Methods for Theoretical Physics</td>
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Semester Two

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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<tbody>
<tr>
<td>PHY2021</td>
<td>Principles of Electromagnetism</td>
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</tr>
<tr>
<td>PHY2023</td>
<td>Statistical Mechanics</td>
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</tr>
<tr>
<td>PHY2024</td>
<td>Principles of Materials and Solid State Physics</td>
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</tr>
<tr>
<td>PHY2029</td>
<td>Physics in the Modern World</td>
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<td>PHY2031</td>
<td>Differential Equations, Transforms and Waves</td>
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</tr>
<tr>
<td>PHY2033</td>
<td>Fluid Dynamics</td>
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Stage Three Modules

Bachelor of Science with Honours in Physics

Semester One

The following modules are compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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</thead>
<tbody>
<tr>
<td>PHY3020</td>
<td>Advanced Quantum Mechanics</td>
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</tr>
<tr>
<td>PHY3022</td>
<td>Relativity and Cosmology</td>
<td>10</td>
</tr>
<tr>
<td>PHY3023</td>
<td>Advanced Materials and Solid State Physics</td>
<td>10</td>
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<tr>
<td>PHY3025</td>
<td>Group Project</td>
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</tr>
<tr>
<td>PHY3026</td>
<td>Electronic Devices</td>
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Semester Two

The following modules are compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY3024</td>
<td>Atoms, Molecules, Nuclei, Particles</td>
<td>10</td>
</tr>
<tr>
<td>PHY3027</td>
<td>Project</td>
<td>20</td>
</tr>
<tr>
<td>PHY3028</td>
<td>Computational Modelling</td>
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You will select three optional modules, usually from the following list.

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<tr>
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<th>Title</th>
<th>Credit Value</th>
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</thead>
<tbody>
<tr>
<td>PHY2033</td>
<td>Fluid Dynamics (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3029</td>
<td>Variational Methods (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3032</td>
<td>Advanced Electromagnetism (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3033</td>
<td>Advanced Astrophysics (Semester 1)</td>
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</tr>
</tbody>
</table>
## Master of Physics with Honours

### Semester One

The following modules are compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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</thead>
<tbody>
<tr>
<td>PHY3020</td>
<td>Advanced Quantum Mechanics</td>
<td>10</td>
</tr>
<tr>
<td>PHY3022</td>
<td>Relativity and Cosmology</td>
<td>10</td>
</tr>
<tr>
<td>PHY3023</td>
<td>Advanced Materials and Solid State Physics</td>
<td>10</td>
</tr>
<tr>
<td>PHY3026</td>
<td>Electronic Devices</td>
<td>10</td>
</tr>
<tr>
<td>PHY3039</td>
<td>Group Project (MPhys Physics)</td>
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</tbody>
</table>

### Semester Two

The following modules are compulsory.

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<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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<tbody>
<tr>
<td>PHY3024</td>
<td>Atoms, Molecules, Nuclei, Particles</td>
<td>10</td>
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<tr>
<td>PHY3028</td>
<td>Computational Modelling</td>
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<td>PHY3029</td>
<td>Variational Methods</td>
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<tr>
<td>PHY3032</td>
<td>Advanced Electromagnetism</td>
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You will select three optional modules, usually from the following list.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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<tbody>
<tr>
<td>PHY2033</td>
<td>Fluid Dynamics (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3033</td>
<td>Advanced Astrophysics (Semester 1)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3036</td>
<td>Partial Differential Equations (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3037</td>
<td>Photonics (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3038</td>
<td>Biophysics (Semester 2)</td>
<td>10</td>
</tr>
</tbody>
</table>

Detailed descriptions of these modules including assessment information can be found in the module catalogue at [www.ncl.ac.uk/module-catalogue/](http://www.ncl.ac.uk/module-catalogue/)
Bachelor of Science with Honours in Theoretical Physics

Semester One

The following modules are compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY3020</td>
<td>Advanced Quantum Mechanics</td>
<td>10</td>
</tr>
<tr>
<td>PHY3022</td>
<td>Relativity and Cosmology</td>
<td>10</td>
</tr>
<tr>
<td>PHY3023</td>
<td>Advanced Materials and Solid State Physics</td>
<td>10</td>
</tr>
<tr>
<td>PHY3025</td>
<td>Group Project</td>
<td>10</td>
</tr>
<tr>
<td>PHY3033</td>
<td>Advanced Astrophysics</td>
<td>10</td>
</tr>
</tbody>
</table>

Semester Two

The following modules are compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY3024</td>
<td>Atoms, Molecules, Nuclei, Particles</td>
<td>10</td>
</tr>
<tr>
<td>PHY3028</td>
<td>Computational Modelling</td>
<td>10</td>
</tr>
<tr>
<td>PHY3032</td>
<td>Advanced Electromagnetism</td>
<td>10</td>
</tr>
<tr>
<td>PHY3034</td>
<td>Theoretical Project</td>
<td>20</td>
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</tbody>
</table>

You will select two optional modules, usually from the following list.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PHY3029</td>
<td>Variational Methods (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3035</td>
<td>Methods for Differential Equations (Semester 1)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3036</td>
<td>Partial Differential Equations (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3037</td>
<td>Photonics (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3038</td>
<td>Biophysics (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3041</td>
<td>Advanced Fluid Dynamics (Semester 1)</td>
<td>10</td>
</tr>
</tbody>
</table>
Master of Theoretical Physics with Honours

Semester One

The following modules are compulsory.

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</thead>
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<td>PHY3023</td>
<td>Advanced Materials and Solid State Physics</td>
<td>10</td>
</tr>
<tr>
<td>PHY3033</td>
<td>Advanced Astrophysics</td>
<td>10</td>
</tr>
<tr>
<td>PHY3039</td>
<td>Group Project (MPhys Physics)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3041</td>
<td>Advanced Fluid Dynamics</td>
<td>10</td>
</tr>
</tbody>
</table>

Semester Two

The following modules are compulsory.

<table>
<thead>
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<th>Module Code</th>
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<th>Credit Value</th>
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<tbody>
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<td>PHY3029</td>
<td>Variational Methods</td>
<td>10</td>
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<td>PHY3032</td>
<td>Advanced Electromagnetism</td>
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</tr>
</tbody>
</table>

You will select two optional modules, usually from the following list.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
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</thead>
<tbody>
<tr>
<td>PHY3036</td>
<td>Partial Differential Equations (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3037</td>
<td>Photonics (Semester 2)</td>
<td>10</td>
</tr>
<tr>
<td>PHY3038</td>
<td>Biophysics (Semester 2)</td>
<td>10</td>
</tr>
</tbody>
</table>

Detailed descriptions of these modules including assessment information can be found in the module catalogue at [www.ncl.ac.uk/module-catalogue/](http://www.ncl.ac.uk/module-catalogue/)
Stage Four Modules

Master of Physics with Honours

Semester One

The following modules are compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY8029</td>
<td>Quantum Fluids</td>
<td>15</td>
</tr>
<tr>
<td>PHY8030</td>
<td>Applied Solid State</td>
<td>15</td>
</tr>
<tr>
<td>PHY8031</td>
<td>Quantum Information and Technology</td>
<td>15</td>
</tr>
<tr>
<td>PHY8035</td>
<td>Quantum Modelling of Molecules, Solids and Nanostructures</td>
<td>15</td>
</tr>
</tbody>
</table>

Semester Two

The following module is compulsory.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY8036</td>
<td>Extended Project</td>
<td>45</td>
</tr>
</tbody>
</table>

You will select one optional module, usually from the following list.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY8038</td>
<td>General Relativity (Semester 2)</td>
<td>15</td>
</tr>
<tr>
<td>PHY8039</td>
<td>Electronic Device Fabrication (Semester 2)</td>
<td>15</td>
</tr>
</tbody>
</table>

Detailed descriptions of these modules including assessment information can be found in the module catalogue at [www.ncl.ac.uk/module-catalogue/](http://www.ncl.ac.uk/module-catalogue/)
<table>
<thead>
<tr>
<th>Criterion</th>
<th>0-24</th>
<th>25-34</th>
<th>35-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and understanding: accuracy, completeness and relevance</td>
<td>Contains very little material addressing the topic incomplete and/or incoherent.</td>
<td>Some relevant material, but generally superficial; does not adequately address learning outcomes. Contains substantial errors and/or omissions.</td>
<td>Contains sufficient relevant accurate material to show evidence of partial attainment of learning outcomes but contains substantial errors and/or omissions.</td>
<td>Contains sufficient relevant accurate material to show evidence of attainment of learning outcomes. May contain significant errors and/or omissions.</td>
<td>Mainly relevant and accurate. Includes a substantial portion of the expected material with appropriate detail. There may be some errors and/or omissions.</td>
<td>Relevant and accurate with few errors and/or omissions. Inclu des most of the expected material in detail and goes beyond taught material.</td>
<td>Coverage of topic is thorough; almost all relevant and accurate, and substantively beyond taught material.</td>
<td>Comprehensive and precise; substantially enhanced by material beyond that which has been taught.</td>
</tr>
<tr>
<td>Use of evidence</td>
<td>Little or no appropriate use of evidence.</td>
<td>Very little use of evidence to form arguments; likely to lack conclusions.</td>
<td>Little successful use of evidence to form arguments; conclusions very weak.</td>
<td>Some successful use of evidence to form arguments, with weak conclusions.</td>
<td>Uses evidence to form arguments, but conclusions may not be consistently convincing.</td>
<td>Sound logical analysis of evidence to form arguments and draw convincing conclusions.</td>
<td>Well-organised and reasoned evaluation of diverse evidence is used to draw convincing independent conclusions.</td>
<td>Thorough, well organised and reasoned evaluation of complex and/or diverse evidence is used to draw strong, independent, convincing conclusions.</td>
</tr>
<tr>
<td>Problem investigation and solving</td>
<td>Does not show ability to investigate problems.</td>
<td>Shows very little ability to investigate problems.</td>
<td>Shows little ability to investigate problems.</td>
<td>Shows some ability to investigate problems.</td>
<td>Shows ability to investigate problems but approach may not be fully thought through.</td>
<td>Shows ability to investigate problems with a well-thought-out approach and produce novel solutions.</td>
<td>Shows ability to investigate problems with a well-thought-out innovative approach and produce novel solutions.</td>
<td>Shows ability to investigate problems with a well-thought-out innovative approach and produce novel solutions.</td>
</tr>
<tr>
<td>Application of concepts</td>
<td>Does not show awareness of concepts.</td>
<td>Shows very little awareness of and ability to apply concepts.</td>
<td>Shows little ability to apply concepts derived from taught material in familiar situations</td>
<td>Shows some ability to apply concepts derived from taught material in familiar situations</td>
<td>Applies concepts derived from taught material largely appropriately in familiar situations.</td>
<td>Applies concepts appropriately and with originality in unfamiliar situations.</td>
<td>Applies concepts effectively and with originality in unfamiliar situations to create a new application.</td>
<td>Applies concepts effectively and with originality in unfamiliar situations to create a new application.</td>
</tr>
</tbody>
</table>