Physics

Undergraduate and Taught Postgraduate Handbook

2019-2020
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**Staff and Key Contacts**

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Director of Undergraduate Pathways: Dr Paco Perez-reche, Meston Building 336, fperez-reche@abdn.ac.uk
Programme Director for MSc Data Science: Prof Marco Thiel, Fraser Noble Building 340, m.thiel@abdn.ac.uk
School Office: Meston Building G05d, ncs.office@abdn.ac.uk

The department’s webpage, which includes a list of staff, can be found at [https://www.abdn.ac.uk/ncs/departments/physics/](https://www.abdn.ac.uk/ncs/departments/physics/)

Physics staff operate an open door policy so please drop in at any time or make an appointment by email if you require any help or additional feedback.

**Institutional Policy**

*Students are asked to make themselves familiar with the information on key institutional policies which have been made available within MyAberdeen (https://abdn.blackboard.com/bbcswebdav/institution/Policies). These policies are relevant to all students and will be useful to you throughout your studies. They contain important information and address issues such as what to do if you are absent, how to raise an appeal or a complaint and indicate how seriously the University takes your feedback.*

*These institutional policies should be read in conjunction with this programme and/or course handbook, in which School specific policies are detailed. Further information can be found on the University's Infohub webpage or by visiting the Infohub.*

The information included in the institutional area for 2019/20 includes the following:

- Absence
- Appeals & Complaints
- Student Discipline
- Class Certificates
- MyAberdeen
- Originality Checking
- Feedback
- Communication
- Graduate Attributes
- The Co-Curriculum

In addition to this handbook, lecturers will supply additional course information regarding course content, course texts and reference lists, homework requirements, assignments and deadlines, the format of examinations and such additional information as you may find helpful. A full synopsis of the course will also be provided.

**Educational Aims**

The educational aims of the Department are to:

- help you understand the basic principles and concepts of Physics and how these relate to the physical universe;
- enhance your communication and problem solving skills in the context of a career with physics content;
- show how Physics can be applied to other subjects.
Transferable Skills
Having a good portfolio of transferable skills is the key to employment these days. It is true that people with a knowledge of University level physics rate highly in a great many professions but in our courses we don’t just teach physics. We also aim to build into our courses experience and training in a wide range of skills, including:

- word-processing, spread-sheet use and computer-aided drawing
- computer based data analysis
- web-based information search and retrieval
- library based information retrieval
- oral and poster presentations
- group and team work
- synopsis writing and report writing
- familiarity with technical computer packages and simulations
- some computer language skills
- mathematical competence
- problem solving and creative skills

These skills are developed to varying extents in all four years of our courses. Our aim is to educate you to be a scientist, not simply to provide an education in science.

Catalogue of Courses
The Catalogue of Courses can be found at https://www.abdn.ac.uk/registry/courses/ and contains the following information, and more, for each course:

- Course Overview and Description
- Course Co-ordinator
- Course Requisites
- Assessment and Feedback

Teaching Timetable
Once you have registered, your timetable can be found at https://www.abdn.ac.uk/mytimetable/courses/index

If you aren’t yet registered or would like to find out if courses clash you should check https://www.abdn.ac.uk/mist/apps/courseoverlay/

Attendance and Monitoring Progress
You should attend classes regularly and do the work of the course. The University operates a monitoring system throughout the academic year to identify students who may be experiencing difficulties with their studies and to ensure that students remain on track for their degree and satisfy the minimum attendance requirements.

If you miss two tutorials without good reason or fail to complete a continuous assessment you will be entered as C6 At Risk. Please read https://www.abdn.ac.uk/students/academic-life/student-monitoring.php for full information.

Absence from Class
You should submit an absence report (via any MyAberdeen course page) every time you miss a class for good reason. You will need to provide supporting evidence if you are absent for more than 7 consecutive days.
Absence from Exams/Impaired Performance
If you believe that illness and/or other personal circumstances may have affected your performance in an examination, or you have been unable to attend an examination, you must submit details through MyAberdeen Absence Reporting on the day of the exam and certainly no later than three days following the date on which you were expected to appear for the exam concerned. This is as per the University’s Policy and Procedure of Student Absence. The policy, linked below, contains information on when supporting evidence (e.g. medical certificates) is required.

Absence policy and further information on Impaired Performance
https://www.abdn.ac.uk/students/academic-life/assessment-exams-3377.php#panel1957

MyAberdeen
MyAberdeen is the University’s Virtual Learning Environment where you can access learning materials and resources associated with your courses. Access at http://www.abdn.ac.uk/myaberdeen

A number of resources have been developed to help you make effective use of MyAberdeen. See https://www.abdn.ac.uk/toolkit/systems/myaberdeen-students/

Each course will have its own MyAberdeen page containing information you need for the course. It’s important you check MyAberdeen regularly.

It is possible to send a class email where ideas and problems can be shared between students taking the same class. This can be done through MyAberdeen as follows: Students can send emails by clicking on the 'Send Email' link in the Tools module box, which is on the MyAberdeen homepage. They can then click on the name of the course to email the class.

Deadlines
Your Course Co-ordinator will notify you of submission dates at the beginning of the course. It is important that the deadlines are met for all continuous assessments. Moderately late submissions (a couple of days) may be accepted but with some penalty. Only on appeal to the Head of Physics may very late submissions (more than two days) be accepted.

We have tried to make sure that you do not have too many clashing deadlines within Physics courses. If you have major deadlines from other departments that clash, then please make sure that the Course Co-ordinator knows. In general, the majority of deadlines will be towards the end of the semester, so allow time for these.

Assessment Submission
The submission boxes for assessments can be found next to the stairs in the Meston Building foyer (entrance opposite Fraser Noble Building).

You must keep a personal copy of submitted work. This copy may be called for in certain circumstances.

We guarantee return of continuous assessment which has been handed in on time within 2 (teaching) weeks of submission. This return is just for inspection of comments made. The assessed work should, however, be returned to the Course Co-ordinator so that the External Examiner may examine it.
Marking
The University Common Grading Scale, CGS, provides a common marking scale which is used across the University. You can find full information at https://www.abdn.ac.uk/infohub/study/CAS.php

Some courses are marked in percentage or “marks out of”. Please see appendix 1 for the Percentage to CGS conversion table used in the School.

Exams
First half session course exams are held in December and second half session course exams are held in May. There is another opportunity in the summer for those who fail, fail to attend or are unable to attend. Deadlines and dates can be found at https://www.abdn.ac.uk/infohub/study/exams.php

Resubmission of Work
There are no available resources for students to re-take laboratory classes that they have missed due to any cause. If you take a resit written exam for any reason then the default policy of the Department is to carry forward continuous assessment marks from your first attempt. In some circumstances, however, you will be allowed to submit missing assessment exercises or re-submit poor performances but you must contact the Course Co-ordinator well in advance of the resit and, if necessary, the Head of Physics.

Study Guides
Here are three study guides that you can find in the library:


Honours Thesis
The project undertaken throughout the fourth year requires that you write a thesis for which separate instruction will be given. Please note that when writing such a major piece of work, you should regularly make backups of your work. Always backup onto the hard drive of the computer and for work in progress keep intermediate versions of the text to act as fall-back sources in case you fall foul of a serious corruption of the current version. Alternatively, back-up onto your filespace on the central computer system (drive H:), which is archived daily.

Degree Classification
Information on how your degree will be classified can be found at
Undergraduate - https://www.abdn.ac.uk/staffnet/teaching/ug-degree-classification-2897.php
Postgraduate - https://www.abdn.ac.uk/staffnet/teaching/pg-progression-award-2898.php

All Single Honours and the Physics components of the Joint Honours degrees involving Physics are equally weighted across 3rd and 4th year.

Student Support
If you have a problem related to the course please speak to the lecturer or Course Co-ordinator in the first instance. If you feel unable to discuss the problem with them, and it affects the whole class, you can raise the issue with the Class Rep. Otherwise, you can arrange to meet with the Head of Department.
If you have personal problems please talk to your Personal Tutor or the member of staff you feel most comfortable with. If you would prefer to talk to a non-academic member of staff you can contact the Advice and Support Office.

**Advice and Support Office**
Based in the Students’ Union Building, the Student Advice and Support team offers impartial and confidential advice and support on a range of issues, including finance, disability information and more. Further information at [https://www.abdn.ac.uk/infohub/support/advice.php](https://www.abdn.ac.uk/infohub/support/advice.php)

**Class Representatives**
Student representatives (Class Reps) are elected on an annual basis. Any students registered within a course/year or programme who wishes to represent a given group of students can stand for election as a Class Representative. You will be informed when the elections for Class Representative will take place.

You can ask your Class Rep at any time to bring up matters of concern with any member of staff.

**What will it involve?**
It will involve speaking to your fellow students about the course/year you represent. This can include any comments that they may have. You will attend a Staff-Student Liaison Committee and you should represent the views and concerns of the students within this meeting. As a representative you will also be able to contribute to the agenda. You then feed back to the students after this meeting with any actions that are being taken.

Class Reps are encouraged to meet with Course Co-ordinators early in each half-session to introduce themselves and to ensure an effective channel of communication is established between the class and the teaching staff.

**Training**
Training for Class Representatives will be run by the Students Association. Training will take place in the fourth or fifth week of teaching each semester.

For more information about the Class Representative system visit [http://www.ausa.org.uk](http://www.ausa.org.uk).

**Staff-Student Liaison Committees**
These meet twice a year to discuss matters of joint concern. If there are any matters that you would like discussed, take the initiative and see your Class Rep. Minutes of the meetings are available in MyAberdeen.

**Course Evaluation**
Towards the end of each course, you will be invited to complete a Student Course Evaluation Form (SCEF). Once completed, SCEFs are considered by the relevant course co-ordinator, Director of Undergraduate Pathways as well as the School Director of Teaching and Learning. Ultimately, the University will consider the points raised in all SCEFs to ensure teaching is of a high quality. The University greatly values your comments and they do help when we are working on ways to improve what we are able to offer.

**Prizes**
The Department offers various prizes and information can be found [here](http://www.ausa.org.uk).
External Examiner
Undergraduate: Dr William Hossack, Edinburgh University
MSc Data Science: to be confirmed

You should note that this is for information only and under no circumstances are students allowed to contact external examiners directly.

Careers
A physics degree is a qualification you are likely to be proud of all your life. It will give you entrance to an enormous range of careers. Your predecessors have given Aberdeen's physics degrees a very good reputation. The majority of our graduates in recent years have enjoyed the subject sufficiently to take a further degree (usually an M.Sc. or Ph.D.), even though that was not their specific aim when they came to University. You can get good and varied advice on academic research from any member of the Department of Physics academic staff.

For a much wider look at possibilities, the University has a careers and appointments service, which is based at 48 College Bounds. Services offered include access to a careers adviser who looks after careers related to your subject. For physics, Peter Fantom (p.s.fantom@abdn.ac.uk), is available for immediate queries as well as access to information rooms, current vacancies, employers' information, deadlines, CV preparation advice, careers skills workshops, etc. More can be found on the web at http://www.abdn.ac.uk/careers/. Job opportunities for physicists can be found on the Institute of Physics web page (http://www.iop.org/) and on-line job matching services also exist, such as Prospects Direct (http://www.prospects.ac.uk/). Not exactly career information, but part-time job opportunities can be found at AUSA joblink www.ausa.org.uk.

The Institute of Physics
The Institute of Physics (the IoP) is the body that oversees the professional aspect of Physics in the UK, and to some extent worldwide. In order to become a full member, the criteria laid down by the Institute need to be fulfilled. More information regarding the Institute can be accessed on the Internet through http://www.iop.org. The Institute supports undergraduates through its university student wing – Nexus. Associate membership is £15 for anyone on a recognised or accredited undergraduate physics degree course (e.g. the Physics based degrees at Aberdeen). This helps you keep in touch with the outside world of physics. It is also a good way to get involved as a STEM ambassador in outreach activities organised by the IoP.
Appendix 1 - Percentage to Common Grade Scale Conversion

<table>
<thead>
<tr>
<th>% From</th>
<th>% To</th>
<th>CGS</th>
</tr>
</thead>
<tbody>
<tr>
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<td>100</td>
<td>22 A1</td>
</tr>
<tr>
<td>84.5</td>
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</tr>
<tr>
<td>0</td>
<td>4.4</td>
<td>0 G3</td>
</tr>
</tbody>
</table>
Appendix 2 - Department of Physics Oral Presentation Assessment

Course: PX | Title: | Candidate:

Marks are awarded on the University’s common grading scale (CGS) under the three categories named below. Some points to watch in the presentation are noted underneath but these points are not prescriptive of what must be in a good presentation. The final mark is derived from the category marks with the weightings 2:3:1.

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Content</th>
<th>Response to questions</th>
</tr>
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<tbody>
<tr>
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</table>

Final CGS

Signature: ___________________ Date: ____________

Examiner's additional comments:

Points to watch

Audio: clear articulation, well-paced delivery, talk directed to audience; distinct at rear of audience; use of pauses and modulation; stops at correct time.

Visual: legible writing; text visible at rear; slide or overheads uncluttered; adequate time allowed for reading each slide or overhead; good visual interest; content supplements talk.

Introduction, context and conclusion: the following made clear: title and author(s); topic to be addressed; level of treatment in relation to assumed knowledge in audience; plan of talk. Conclusion is well drawn.

Treatment of subject: physics involved is highlighted; good grasp of fundamentals; appropriate choice of sub-sections; logical structure and arguments; good address of implicit or explicit questions; good balance of time on sub-sections.

Technical: appropriate use of technical vocabulary; technically accurate; good use of numbers to support arguments or statements; appropriate introduction of quantitative relationships; appropriate explanation of concepts and symbols used.

Question response: Good attempt made to address questions; additional clarity or facts provided in answers; logical reasoning exhibited; any questions outside the scope of the topic appropriately fielded.

The standard CGS grades are first-class (I): A1 to A5; II-1,B1 to B3; II-2, C1 to C3; D1 to D3; Fail, F1 to G3. CGS A1 does not mean that the performance cannot be bettered but simply that it was outstanding in the context of the assignment.