Dear Entrant Students

Welcome

Welcome to all undergraduate entrants to the School this September. Congratulations on your achievements that have led to you being given this opportunity, and thank you for choosing the University of St Andrews and our School. I look forward to working with you in the years ahead. I am the Director of Teaching in the School, and as such I am one of a number of people here to assist you in organising your studies.

We are happy that the reputation for teaching, research, and lifestyle that the School and University enjoy means that we get many excellent applicants to study in the School. The relatively high asking rate that we have to use in order to keep our intake numbers down to the allowed value will give you the benefit of finding many other highly-talented students in your classes. The nature of the University and our entrant students means that you are likely to find many other friendly and sociable students in the School, in the student societies and clubs, and in the University residences. I hope that you find your time here to be enjoyable, interesting, and useful.

Information

I imagine that the University has already directed you to relevant information for entrant students that it publishes online. The School also publishes potentially useful material online, and at this stage I would like to draw your attention to the information to new and returning students that is on the “latest news” section of the School’s home page, www.st-andrews.ac.uk/physics/, or directly at http://www.st-andrews.ac.uk/physics/news/Panda_news/bds2_NewSession2013-14_24_7_13.php

The School produces a “First and Second Level Modules” handbook. Last year’s version is currently available from the “Students and Staff” section of the School website, and this will change to the new version in the near future. You may receive a paper copy of this handbook in Orientation Week or at the enrolment lectures (details below). Please read through this handbook carefully, as it contains important information about how your studies are organised, what resources are available, and the “rules” of your programme. You are expected to be familiar with the material in this document; I hope you find it to be a useful resource.

Lecture timetables and other items of information are available from links on the same “Students and Staff” School web page. Again, there is still some updating to do.

Level One or Two Entry?

A major question for many entrants is the level at which to start their studies here. Starting with level-one physics gives a broad-based year of entry with the possibility of picking up a number of “extra” subjects to broaden your study, and with the BSc honours degree programme taking four years and the MPhys five. Those entrants who choose to take the accelerated programme start off with level two physics modules and can complete the honours BSc programme in three years or the MPhys in four. Those entering straight from the Highers qualifications are normally obliged to take level-one entry, and most of the joint degree programmes
Those entering with good Advanced Highers or A-levels in physics and mathematics (AA), and who are sure that the degree they wish to aim for is within the School or a joint degree with this School and Maths, are invited to choose to take the accelerated programme. Please note that A-level qualified entrants are normally eligible for accelerated entry only if they have done at least one mechanics module in their A-level maths. IB students with offers to join our physics/astronomy degree programmes will normally be in the position to choose either level one or two entry. Those from other qualification systems are welcome to contact us to ask what their options might be. I note that a number of those who are eligible for the accelerated programme still choose to take level-one entry for a variety of reasons, and that accelerated entry students on average do well in the level two physics modules. In recent years between one quarter and one half of our entrant students have taken the accelerated entry route.

Level-two entry is certainly more demanding than level-one entry, but we believe that it suits many entrants well. It is worth noting that those on the accelerated-entry route normally take, in addition to the two level-two physics modules, the main level-one maths module, the main level-two maths module, and one other level-one module. For intending astronomers, this would be level-one astronomy.

There is no need to make a decision on which entry route you wish to take at this stage. This can be discussed with staff here in Orientation week and, subject to appropriate qualifications, you may register for either level-one or level-two entry during discussions with your adviser, regardless of what you entered on your UCAS form.

Students entering on the Gateway to Physics and Astronomy programme will normally enter at level one and take two or three of the dedicated Gateway modules in their entry year.

**Recommended Books – to be confirmed**

The core text for Physics 1A and 1B, Physics 2A, and 2B is Halliday, Resnick, and Walker, Principles of Physics, Extended 9th edition. We ask that this book is purchased by all students on these modules. We strongly recommend making this purchase at Blackwells bookshop in St Andrews, as doing so will give students for no additional charge access to the e-learning resources associated with this text. The ISBN number for the book with the “Wiley Plus” online resource is 9780470576083. This resource contains much useful stuff provided by the publisher, and will contain material tailored by us for use at St Andrews. It is available only from Blackwell’s bookshop in St Andrews, and is priced at £44.99, which is considerably lower than the list price. Given the large amount of online resource that comes with this purchase, this seems to us to be good value compared with buying the book elsewhere without the associated electronic resources. Blackwells in St Andrews have also agreed to post the book to students wishing to purchase it before arriving in St Andrews, with a £3 postage and packing charge for deliveries to UK addresses. The main recommended textbook for level-one astronomy and astrophysics is M L Kutner (CUP 2003) Astronomy – a physical perspective. This book is also sufficient for the second level module in astronomy and astrophysics. There are additional books that are recommended for consultation on all these modules, and details of these can be accessed via the School’s Staff and Students web page.

**Orientation Week**

The University will be providing a wide range of events for you in the week of your arrival towards the end of September. This is known as “Freshers’ Week” in some universities, but the “Orientation Week” name here is chosen to indicate that as well as various social events there are significant academic-related activities happening that week for students at all levels of study. The School is involved in some of these events, and in providing some special activities just for students of physics and astronomy. More details are in the following table, though I recommend keeping an eye on the School’s web news page in case any of these details have to change, and for any new events that are added.
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<tr>
<th>Date</th>
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<td>Monday 9th</td>
<td>9.30-10.30 – “Drop-in” welcome and discussion. Informal and optional session in the School’s main concourse with the School’s Director of Teaching, School Student President, and others. Noon - University welcoming ceremony for those entering the Science Faculty. 2-4 Academic Fair, Lower and Upper College Halls (off North Street). This is a good chance to ask questions of staff in schools running modules of interest to you.</td>
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<tr>
<td>Tuesday 10th</td>
<td>3 - 5 pm – Reception and Fun Quiz for entrants to Physics and Astronomy Modules All entrant students in physics and astronomy are invited to join us for our “big” event of Orientation Week. We aim to use this to help students meet each other and to allow students to meet with staff and to see and hear something of what happens in the School. We’ll start off with a couple of fun quizzes. We will gather participants into groups to answer a variety of quiz questions, some associated with the School and physics, and some not. Established students will be part of the event too, and there will be a chance to hear about the student astronomy and physics societies. After this, we will host an informal reception in the main concourse, where you may meet other entrant students, established students, and staff. Some undergraduate students who were doing research projects here over the summer will present their work at posters and you are invited to chat with them too.</td>
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<td>Thursday 12th</td>
<td>Enrolment sessions (compulsory) for those planning to enter PH1011 Physics 1A (noon, theatre B), AS1001 Astronomy One (11 am, theatre C), Astronomy Two (11 am room 301), PH2011 Physics 2A (10 am, theatre B, 2-4 pm theatre B).</td>
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<td>Various</td>
<td>PC Classroom familiarisation and Library induction sessions for all undergraduate entrants to the School. Please sign up for a place on the main academic notice boards in the School. All entrants are asked to attend one of these sessions.</td>
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<tr>
<td>Friday 13th</td>
<td>Celebrations for the 600th anniversary of the University.</td>
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Many of the above activities are optional, but in Orientation week you must attend a meeting with your Adviser of Studies to decide on your module choices for the year. The advising time slots that you can sign up for on notice boards in the School are likely to be within 9 to 5 on the Monday, Tuesday and Wednesday. You should try to complete the online “pre-advising” before you arrive in St Andrews, if this is possible for you. Please see [http://www.st-andrews.ac.uk/newstudents/programmes/science/](http://www.st-andrews.ac.uk/newstudents/programmes/science/)

You must also attend the enrolment and orientation sessions for your modules that are being held on the Thursday of Orientation Week.

**Teaching, Organisation, and Advice for Students**

Conventional classes will start on Monday 16 September 2013. You should come along prepared to listen, write, think, discuss, and question, please.

My colleagues and I will be available to assist you in your time at St Andrews. Your Adviser of Studies may be the first formal contact with the School, or you may wish to discuss your options informally with staff at the Academic Fair or in the drop-in sessions beforehand. Your Adviser continues to be available throughout the year for your assistance, as indeed do all our staff. Advisers for level one and two physics and astronomy students this coming year will be Drs Donatella Cassettari, Friedrich Koenig, and Paul Cruickshank, with the adviser allocated to you depending on where your family name’s initial falls in the alphabet. Please feel free to talk to my colleagues or me before and after lectures, in tutorial groups, and in the laboratories. We are also available to give advice on an individual basis. The names and locations of staff are on the School’s webpage.
and in our handbooks. I note that we have a link on the School’s “Staff and Students” web page to “Who should I contact for advice or help?”, which may be of use to you in your time with us.

Each of the level-one and level-two modules within the School has its own teaching team and its own coordinator. The coordinator is another person who can provide advice for you, and who will be interacting with you regarding various administrative aspects of the module. Physics 1A and 1B modules are coordinated by Dr Tom Brown (email ctab, room 216), and the Gateway modules by Dr Lucy Hadfield (email ljh11, room 304). Level two physics modules are coordinated by Dr Antje Kohnle (email ak81, room 314). Level-one astronomy and astrophysics is coordinated by Prof Moira Jardine (email mmj, room 318).

We look forward to working with you in your studies of physics and astronomy. You have been highly successful in your school-based studies and assessments. We are keen for you to succeed in your university studies. Here, as an adult learner, you will have much more freedom as to how you spend your time, and you may be expected to do more learning by yourself than you have been used to. It is up to you to schedule your time to ensure that you do sufficient study to understand the material fully, to complete the tutorial sheets, the lab work, and revision. We ask you to take responsibility for your own learning. You should be asking yourself if you really understand something sufficiently well, and you should be the person taking steps to get you to a full understanding if you feel this is not the case. We provide lots of learning opportunities, and access to advice and support, but it is you who must drive your studies.

You may find a difference in emphasis from previous studies; the material we will be working with and assessing will focus as much on understanding how we get from basic physics to a particular relationship as on the relationship itself. We wish you to come to terms sufficiently with the material that you can work successfully with it, and be able to do “new-to-you” things with it. The complexity of the material is likely to increase, and your problem solving and conceptual reasoning skills will need to be developed. But in your studies there will be plenty of support offered. The normal lectures, tutorials, workshops, and labs are the “standard” parts. You can ask for advice and assistance from various people as noted above. Fellow-students can be very valuable partners in your learning. Textbooks and the web can be great sources of information, and as your studies progress articles in research journals will become accessible.

We hope that the challenges will be interesting ones, and of course it is the set of skills, abilities, and knowledge gained from your time at University that can set you up for all sorts of other interesting opportunities in the future.

We realise that life as a student is not all about academic work. There are all sorts of other interesting activities available. We ask, however, that you strive to strike a sensible balance between academic study and time on leisure and any employment. Your first year of studies here gives the foundation for all your future study with us. It is important that you put in enough time to your academic work in your entrant year to make these foundations secure.

Staff at the University’s Student Advice and Support Centre can provide advice and assistance in the case of personal difficulties (small or large) in your time here. [http://www.st-andrews.ac.uk/students/advice/](http://www.st-andrews.ac.uk/students/advice/)

There is a maths support adviser and a study skills adviser available to you in the “CAPOD” central unit. [http://www.st-andrews.ac.uk/capod/students/studentdevelopment/](http://www.st-andrews.ac.uk/capod/students/studentdevelopment/)

The University Careers Centre can provide guidance on what you might choose to do while at University to maximise your options post-graduation. However, although there is a great deal of support available to students, it is up to students as adults to seek that support in the first place. Please do make use of the advice and assistance that is available to you.

As the start of your time at St Andrews approaches, it might be worth considering doing some additional preparation for your studies. It is perhaps surprising how “rusty” some physics and maths can become over the summer! You may wish to look through both your maths and physics notes. In particular, you might want to spend some time on the mechanics that you covered in both maths and physics, and compare and integrate
together what you did in those studies. Those seeking some revision of their core maths skills may wish to look at the useful material online at MathCentre:- www.mathcentre.ac.uk/

We are pleased that our School has a reputation for being “student-friendly”. We are delighted that our final year class reported a 100% satisfaction rate in the National Student Survey. A major part of our jobs is to provide you with the opportunities to develop as a physical scientist, and we look forward to working with you in that endeavour. If you have any queries that you wish to have answered before you come to St Andrews, by all means get in contact with me.

Best Regards

Bruce Sinclair