

June 2015

Update for schools

Cambridge Pre-U is an exciting post-16 qualification preparing learners for university



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Practicals at heart of Cambridge Pre-U sciences

By including practicals in the assessment, Cambridge Pre-U encourages the teaching and learning of practical skills as an integrated part of the science course.

Ofqual's decision to remove the examination of practicals from A Level grades in science has been met by opposition from many in the scientific community. There is concern that practicals will be deprioritised, with students given less opportunity to 'do' science in the classroom and find out if they enjoy it. There is also concern from universities that students will not be adequately prepared for degree-level science.

We support the view that practicals should count towards the final grade. That's why 15 per cent of the marks

for Cambridge Pre-U Chemistry, Physics and Biology are allocated to the practical component, with students encouraged to develop the independent planning and research skills needed for university.

Students take a practical paper for both Biology and Chemistry. For Physics they carry out an extended investigation.

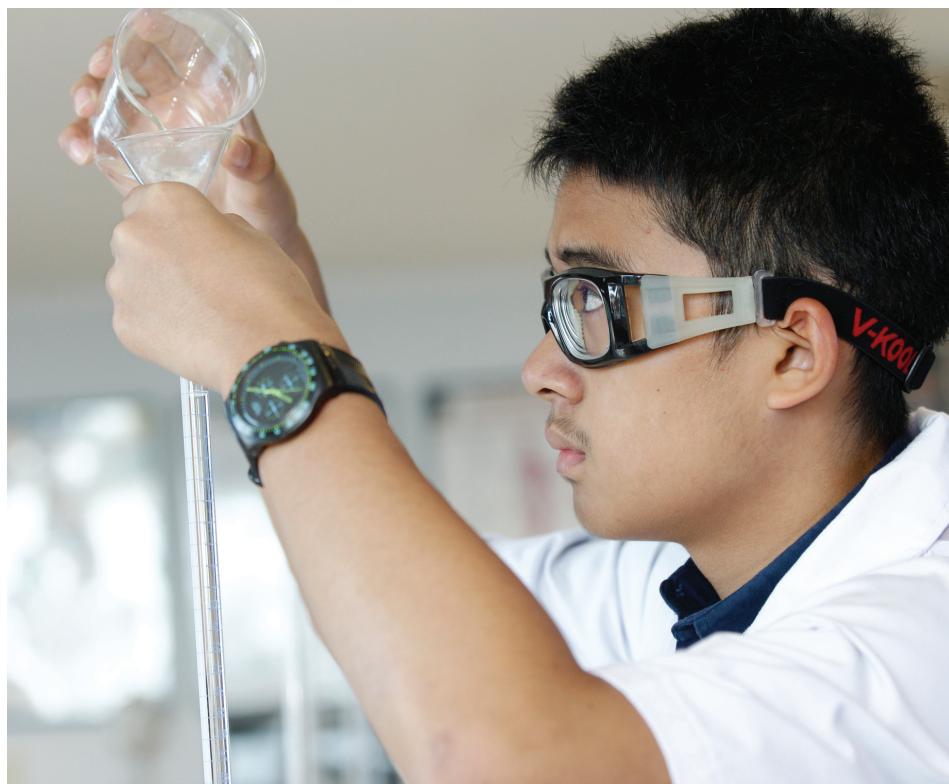
Steve Adams, Head of Science at Shrewsbury School, says the Personal Investigation is the reason why his school is moving entirely to Cambridge Pre-U Physics next year,

having offered the course alongside A Level since 2008.

Steve says Shrewsbury students complete the investigation during a four-week window in the second term of the upper sixth year. By that time they have gained a wide experience of using different types of apparatus, planning simple experiments and analysing experimental data and uncertainties through regular practical activities.

Steve explains: "The investigation gives students the opportunity to

Practicals at heart of Cambridge Pre-U sciences continued



demonstrate these skills in the context of an extended piece of experimental work supported by relevant independent research on a topic of their own choice. This is certainly challenging, both for students and teachers, but also rewarding – far more rewarding than some of the activities that can go into the hoop-jumping preparation essential for success on some existing practical assessment schemes.

"My upper sixth completed their own investigations a few weeks ago and their topics included: forced and damped oscillatory systems, effectiveness of radiation absorbers, resonance in a.c. circuits, rolling friction, loudspeaker baffles, efficiency of light bulbs and fluid flow from containers. Students had an opportunity to use sophisticated apparatus and all of the projects took them beyond the taught course.

"Whilst choosing a research question and getting to the starting point can be daunting, and at times frustrating, there is no doubt that the immersion in a problem is valuable in

itself. Also, the interaction between students and their teachers (and technicians) enhances a valuable educational experience that is far more like the real world than assessment schemes that isolate and examine separate skills."

Former Cambridge Pre-U students have told us the physics investigation helped prepare them for university by giving them insight into more in-depth research. Brian Lau, a former Charterhouse student, says the physics investigation was "one of [his] finest memories" from school. He says: "I was able to design my own experiment, and I was allowed to access all the equipment and tools needed to complete my project. Through these projects and experiments, I truly felt for the first time that science is actually all around us and it happens every single day."

Now in his third year of a Medicine degree at the Chinese University of Hong Kong, Brian says his desire to study medicine was influenced by the practical work he did at school.

Assessment of practical skills in Cambridge Pre-U sciences

Physics: Personal Investigation, worth 15 per cent of the mark

By taking complete ownership of the investigation – from choosing the topic through to writing it up – students get a taste of what's expected of them at university. The project must be completed within 20 hours and students are assessed on their ability to plan, make observations, use appropriate instruments and principles, and produce a well-organised report.

Biology: Practical paper, worth 15 per cent of the mark

Section A consists of one or two practical-based questions and section B consists of one or more questions involving the use of a microscope. Students are not given a complete set of instructions to follow, but are expected to make decisions about how to carry out the practical work.

Chemistry: Practical paper, worth 15 per cent of the mark

The Chemistry practical paper includes one question on qualitative analysis and one or more questions on quantitative analysis. To further encourage the development of practical skills, one or more questions in the written paper (Paper 2) assesses practical knowledge. Students need extensive lab experience in order to answer these questions.

How science practicals prepared me for university

We spoke to some science undergraduates to find out how practical work influenced their degree choice and benefited their studies.

Ed Barnard is in the third year of a Chemistry degree at Oxford. He studied Cambridge Pre-U Chemistry and Physics.

Although he prefers theory to practical work, Ed recognises that practicals helped him appreciate how data is gathered.

"I used a number of skills that I developed at Cambridge Pre-U throughout the university practical course, which I have just completed. Some examples would be titrations, melting points and use of ground glassware.

"Probably the most important skill I developed at school was the ability to write up experiments coherently, interpret my data and account for errors."

“Practicals were taken seriously at school because they were examined.”

Ed Barnard

Kunal Bhanot is in the third year of a Medicine degree at Imperial College London. He studied Cambridge Pre-U Chemistry and Biology.

"I cannot stress enough how important practical work was in preparing me for university. In medicine, for instance, the first two years consist of plenty of laboratory work. A good example of this would be finding the concentration of haemoglobin in blood. Had it not been for earlier practical work at Cambridge Pre-U, the concept of centrifuging blood would have been more alien at the time.

"The practical work [we did at school] gave us the opportunity to see science in action, which was directly applicable to whichever jobs we wanted to pursue in the future."

“The development of practical skills is fundamental to accurate scientific practice.”

Kunal Bhanot

Martin Fung is studying Medicine at Imperial College London. He sat his Cambridge Pre-U science exams in 2012.

Martin says: "I was given ample opportunity [at school] to get involved with science practicals across all three sciences, in particular in physics, where we had the chance to conduct a Personal Investigation.

"Practicals have, to some degree, helped to develop my interest in the sciences. They helped me develop some skills, such as attention to detail, following instructions, and perfection of a manual skill through repetition (in particular with titrations in chemistry)."

“It was useful to apply scientific principles to experiments and see them in action.”

Martin Fung

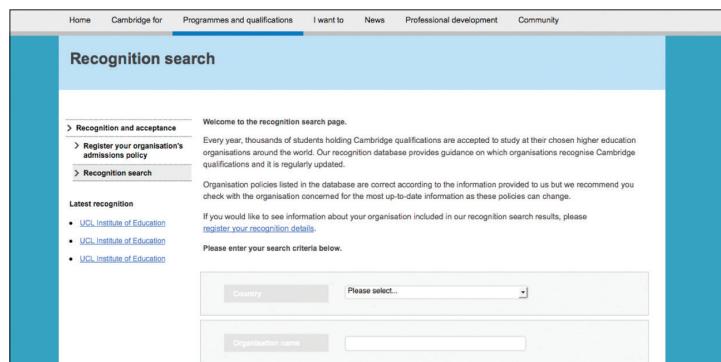
Interested in offering Cambridge Pre-U sciences?

You can watch a case study video filmed at Winchester College at www.cie.org.uk/preuvideos



Now even easier to search for university admission policies

We've launched an improved version of our recognitions database to make it easier to search for organisations that accept Cambridge qualifications.



The screenshot shows the 'Recognition search' page. At the top, there's a navigation bar with links to Home, Cambridge for, Programmes and qualifications, I want to, News, Professional development, and Community. Below the navigation, the title 'Recognition search' is displayed. A sidebar on the left contains links for 'Recognition and acceptance', 'Register your organisation's admissions policy', and 'Recognition search'. Under 'Latest recognition', there are three entries: UCL Institute of Education, UCL Institute of Education, and UCL Institute of Education. The main content area includes a welcome message about the database, a note about organisation policies, and a search form with dropdown menus for 'Country' and 'Organisation name'.

You can now search for Cambridge Pre-U by Principal Subject, Short Course and Diploma. Recognition statements link straight to the university's website, and the organisations we've most recently added to the database are highlighted.

Our Recognitions team works closely with universities and colleges worldwide and we regularly update the database with new admissions policies.

Find the database at www.cie.org.uk/recognition

We want
to hear
from you!



As uptake of Cambridge qualifications continues to rise in the UK, we are considering broadening this newsletter so that it includes updates on Cambridge IGCSE® and Cambridge International AS & A Levels. Would you welcome such a change?

Please give us your views by completing the survey at www.cie.org.uk/preusurvey or emailing us at commsmanager@cie.org.uk

We would also like to know if there is any other type of content you would like to read in the newsletter, and if your school would be willing to contribute to articles.

Thank you in advance for your feedback.

Online learning area for Cambridge Global Perspectives®

Schools offering Cambridge Pre-U Global Perspectives & Research (GPR) can use an online learning area where their students can collaborate with each other – and with students in other schools.

The learning area supports the project-based approach of Cambridge Pre-U GPR by providing a space where students can save their research. Teachers can also use it to share resources with their class ahead of lessons and review how projects are progressing. Cambridge Global Perspectives encourages students to think about global issues from a range of viewpoints. The learning area supports this by making it easier for Cambridge Pre-U GPR schools around the world to link up with each other and build online communities.

How to register:

To find out how other schools are using this resource and to request a login, go to www.cie.org.uk/gplearningarea



Training and events

Cambridge Schools Conferences 2015, UK and Dubai



Every year school leaders and teachers from Cambridge schools worldwide come together at our Cambridge Schools Conference. This year we are holding two conferences, in Cambridge from Sunday 13 to Tuesday 15 September and in Dubai from Thursday 10 to Saturday 12 December.

The theme is 'Education fit for the future: planning for a changing world', and the programme is designed to support professional learning through keynote speeches, panel sessions and workshops.

What makes our conference unique is the opportunity it creates for teachers from a diverse mix of countries and school types to share ideas and experiences.

To find out more and book your place, go to www.cie.org.uk/csc-2015

Are you attending these events?

Come and talk to us about Cambridge IGCSE, Cambridge International AS & A Level and Cambridge Pre-U at the following events:

11 June 2015

UCAS (Universities and Colleges Admissions Service) International Teachers and Advisers Conference, London

26–27 June 2015

NATE (The National Association for the Teaching of English) Conference, Gateshead

6–9 October 2015

HMC Annual Conference, St Andrews

For the latest information about our events, go to our website at www.cie.org.uk/events

Forthcoming training

We will be holding the following courses in 2015 for Cambridge Pre-U and Cambridge International AS & A Level subjects. Please check our events calendar for dates later this year at www.cie.org.uk/events

June 2015 – introductory level training

Cambridge International AS & A Level History
– Friday 19 June, London

Cambridge Pre-U History
– Wednesday 24 June, London

September 2015 – introductory level training

Cambridge International AS & A Level Geography
Cambridge International AS & A Level Biology
Cambridge International AS & A Level Chemistry
Cambridge International AS & A Level Physics

November 2015 – intermediate level training

Cambridge Pre-U Literature in English
Cambridge Pre-U Geography
Cambridge Pre-U History
Cambridge Pre-U Philosophy & Theology
Cambridge Pre-U Global Perspectives & Research
Cambridge Pre-U Mandarin Chinese
Cambridge Pre-U French
Cambridge Pre-U German
Cambridge Pre-U Spanish
Cambridge Pre-U Biology
Cambridge Pre-U Chemistry
Cambridge Pre-U Physics
Cambridge Pre-U Music
November 2015 – introductory level training
Cambridge Pre-U Drama & Theatre

Subject spotlights

In every issue of this newsletter we shine a spotlight on particular Cambridge Pre-U subjects. For this issue we have spoken to teachers of Geography and Philosophy & Theology to find out how they, and their students, are getting on with the courses.

Geography

Peter Price is Head of Geography at Charterhouse in Surrey. The school started teaching Cambridge Pre-U Geography in 2008.

Richard Barnes teaches geography at Downe House in Berkshire, where the qualification has been taught since 2010.

What made you choose the qualification?

PP: The school had adopted a linear assessment model in 2008 and the majority of departments taught Cambridge Pre-U. The main attractions of the Geography syllabus to me were its inherent linear design, the 50:50 balance of physical and human geography, the high level of choice of topics with no compulsory content, and the contemporary and topical nature of the human geography content.

RB: Most of our departments decided to adopt the syllabus to become a Principal Subject within the Cambridge Pre-U Diploma.

How have your students responded to the course?

PP: Extremely well and numbers are up. They appreciate the changing content after (I)GCSE and the holistic style of learning. Their knowledge and confidence build steadily over two years, which is one of the key attractions of a truly linear course.

RB: Some of the more able have really thrived, and in 2013 and 2014 we achieved upper distinctions for a number of girls.

Are there particular features of the course that work well?

PP: I teach the human topics and they bind together extremely well in a two-year spiral of knowledge. We teach (in order): Spatial Inequalities & Poverty, Health, Trade, Debt & Aid and Provision of Food. All 15 and 25-mark essays are assessed using a consistent and easy-to-use generic mark scheme: we use this with students throughout the course and it helps to build their confidence with essay writing. The assessment of fieldwork investigations is handled well as a written exam (Paper 4) as opposed to a submitted piece of coursework.

RB: Some topics are very appealing – especially so on the ‘human’ side of the geographical issues paper. Hazards are also popular with some students. The emphasis on research skills is a strength.

How have your students benefited from taking Cambridge Pre-U Geography?

PP: Part of the ethos of Cambridge Pre-U is not to have ‘tied’ resources, so that students are encouraged into wide-ranging and primary research. At Charterhouse, independent learning is strongly encouraged, and our pupils benefit in a number of ways, for example, being able to handle a variety of information sources using a range of media.

RB: Cambridge Pre-U has developed their question analysis, essay writing and in-depth research skills.

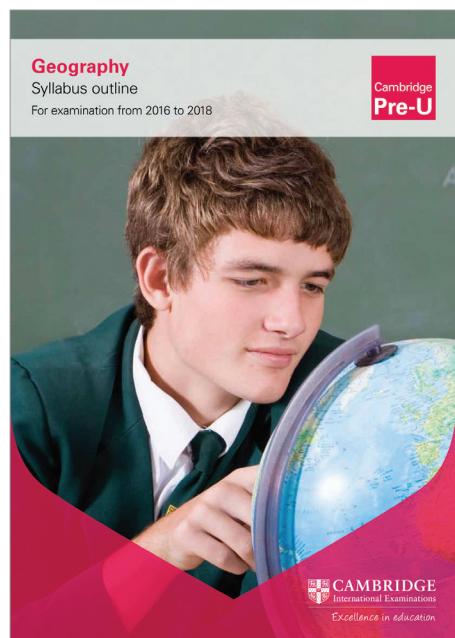
Have some of them gone on to study geography at university and, if so, where?

PP: An increasing number have chosen to study geography at university since we started teaching Cambridge Pre-U. I feel that this is at least partly due to the novel, contemporary and challenging content, the style of learning and more open-ended (rather than prescribed) content.

RB: Yes, many – Cambridge, Exeter, RHUL, Liverpool, Newcastle, Edinburgh and Bristol.

Do your former students think that Cambridge Pre-U Geography was a good preparation for study at university?

PP: Our returning students tell us that Cambridge Pre-U is well named as it developed them as



independent learners who can think for themselves. They adapt very well to university study.

RB: Several girls have reported that they are well ahead of others in terms of content depth and essay preparations.

Philosophy & Theology

Stuart Langhorn is Head of



Philosophy, Ethics and Religion at Lancaster Royal Grammar School. The school has offered the Cambridge Pre-U course for two years.

Louise Trumper is Subject Leader



RS at Oakwood Park Grammar School. They introduced the course more than five years ago.

What made you choose the qualification?

SL: Mainly dissatisfaction with the standard of marking of the course we were teaching. I was looking for a course that was interested in sixth form students and preparing them for university, instead of trying to teach a university course at A Level. The range and breadth of the Cambridge Pre-U course offers that. I particularly like its focus on questions and skills rather than content.

LT: We chose the qualification because we liked the linear approach. We feel that a subject like this requires the full two years of study before external exams. This gives students a better opportunity to gain a deeper understanding of philosophy and theology and how to apply that knowledge and evaluation into essays. We also liked the topics that are covered in the three papers and felt that they went much deeper than the A Level courses with similar topics.

How have your students responded to the course?

SL: They love it. They enjoy debate and discussions. There has been a surge in uptake for next year as they find the areas interesting and relevant.

LT: The course is extremely successful at our school. We have two groups in both years 12 and 13. Students enjoy the stretch and challenge that the course offers.

Are there particular features of the course that work well?

SL: The two-year structure allows pupils to embed their learning and then to make connections between different areas of the course. The textual studies, particularly Sartre, allow them to discuss at a high level.

LT: The topics are very open ended and this benefits our students as they are able to apply a wide range of knowledge to exam essays. We also like the set texts that students study on Papers 2 and 3. Cambridge Pre-U works very well for our students as those of the very highest ability are able to really challenge themselves with the wider reading that they undertake. The study of the set texts helps them to learn how to read academic texts and analyse the philosophical concepts.

How have your students benefited from taking Cambridge Pre-U Philosophy & Theology?

SL: Increased confidence in philosophy.

LT: Our students have benefited in a number of ways. Many students have gone on to top universities after studying Cambridge Pre-U. Also we feel that the course gives students a better and broader understanding of philosophy rather than putting topics into boxes. They are able to see the links between topics and philosophers and so they are more equipped to make links in their essays and show a greater level of critical analysis.

Philosophy and Theology
Syllabus outline
For examination from 2016 to 2018

Cambridge Pre-U

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Have some of them gone on to study philosophy or theology at university and, if so, where?

SL: Last year's students went to Maastricht to study Liberal Arts and Bradford for Peace Studies.

LT: A number of students have gone on to study philosophy at UCL, King's, Heythrop, Nottingham, Exeter, Birmingham and Reading.

Do your former students think that Cambridge Pre-U Philosophy & Theology was a good preparation for study at university?

SL: Absolutely – it's what sparked their enthusiasm.

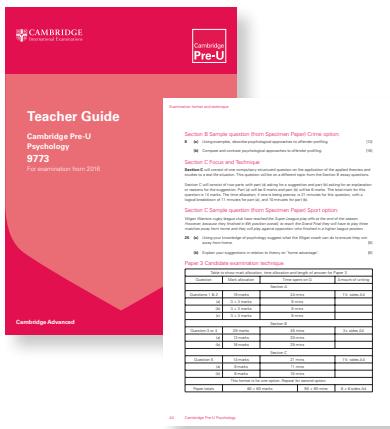
LT: The course is absolutely the best preparation for the study of many arts-based subjects at university as it helps students to see the wider picture and gives them time to develop their writing skills.

New curriculum support resources

The following Teacher Guides have been published this year. They support teaching for examination from 2016.

- Psychology
- Mathematics and Further Mathematics
- Physics
- Music.

Cambridge teachers can download these guides from our secure Teacher Support site at <http://teachers.cie.org.uk>



Look inside our support sites

We have made some short videos to give schools not yet registered with Cambridge a preview of our support sites.

Teacher Support is our free site for teachers, containing hundreds of resources as well as subject discussion forums. CIE Direct is our admin tool for exams officers, allowing you to exchange information securely with us. We also offer dedicated support sites for our Cambridge Primary and Cambridge Secondary 1 programmes, which include assessment and analysis tools.

The videos will also help schools new to Cambridge get the most out of our support sites. To watch the videos, go to www.cie.org.uk/demovideos

Learn more!

Find us at www.cie.org.uk/cambridgepreu or contact us at info@cie.org.uk or on 01223 553 554.

Find our stand at conferences, or attend one of our free INSET days.

What's available

Here's a list of subjects for examination in 2016. Subjects marked with an asterisk (*) are also available as Short Courses.

Mathematics*
Further Mathematics*

Literature in English

Biology
Chemistry
Physics

French*
German*
Italian*
Mandarin Chinese*
Russian*
Spanish*

Art History
Classical Greek
Comparative Government & Politics
Geography
History
Latin
Philosophy & Theology
Psychology

Business & Management
Economics

Art & Design
Drama & Theatre
Music

Global Perspectives & Research
(a two-year extended project qualification). A Global Perspectives Short Course is also available.

Classical Heritage and Sports Science have been withdrawn. The last examinations for these subjects will take place in 2015. The last examination for Comparative Government & Politics will be in June 2017.

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