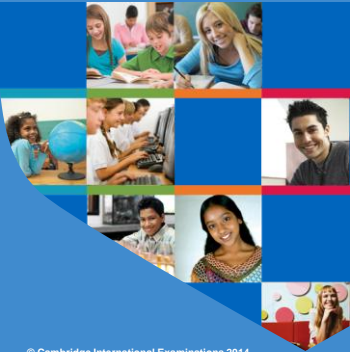


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Cambridge Pre-U Getting Started - Chemistry
INSET - London

Iain Smith

28 February 2014

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Ofqual Exam Boards Seminars Report

Ofqual has recently released reviewed seminars led by examination boards.

For this reason we are now **audio recording** all seminars.

Please respect the position of your trainer, the confidentiality of the examination process and also the importance of teaching the full syllabus.

Thank you!



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Cambridge Pre-U Getting Started Chemistry INSET London - February 28, 2014

- Liberating learning
- Developing successful learners



Housekeeping

- Health & Safety
- Fire alarms
- Fire safety
- Start-finish, breaks
- Washrooms
- Refreshments
- Plan of the day

Cambridge International Examinations



- ▶ the world's largest provider of international qualifications for 5 – 19 year olds
- ▶ develops successful learners in over 160 countries
- ▶ valued by over 9,000 schools worldwide
- ▶ part of the University of Cambridge – renowned worldwide for excellence in education

Linear specifications

- Content is viewed as a whole – there is a more holistic approach.
- Content will usually be divided into different sections but these will not be totally self-contained.
- Links between topics are emphasised and encouraged.
- The key concepts and skills normally underpin the entire course.

Summary of the features of a Cambridge specification

- links between topics
- continuous coverage of all the assessment objectives
- opportunities for formative assessment
- plenty of time for revision.

Pre-U Chemistry (Principal) 9791

- Launched for first teaching in 2008
 - first examinations in 2010.
- Updated specification for first teaching 2014
 - examinations to be taken in 2016
 - 380 guided learning hours (*cf.* 360 current A-levels)
 - builds on Level 2 qualifications in Chemistry (\approx A*–C at GCSE) including IGCSE & GCSE Science + Additional Science.

Scheme of Assessment

Component	Length	Marks	Weighting
Paper 1 – Multiple Choice	1 h	40	15%
Paper 2 – Part A Written	2 h 15	100	35%
Paper 3 – Part B Written	2 h 15	100	35%
Paper 4 – Practical	2 h	40	15%

- Examined in June examination series
- November ‘retake’ examination
 - only for candidates who first sat in previous June.

Component details – papers 1 & 2

- Paper 1 – Multiple Choice
 - 40 multiple choice questions from Parts A & B
(change from previous specification).
- Paper 2 – Part A Written
 - structured questions/longer answers: Part A
 - practical planning & evaluation questions: Part C.

Component details – papers 3 & 4

- Paper 3 – Part B Written
 - similar format to paper 2
 - focus on Part B topics
 - cross-topic questions: some Part A coverage.
- Paper 4 – Practical
 - laboratory-based, experimental skills
 - e.g. volumetric analysis, determination, observation
 - quantitative & qualitative analysis.

Grading

- three-band, nine-grade scale
- finer differentiation
- accessible to all who currently achieve A-level pass
- D1 reports achievement beyond A*.

Distinction	1	Top of A*
	2	
	3	
Merit	1	A/B boundary
	2	
	3	
Pass	1	finer differentiation
	2	
	3	
		E/U boundary

Grading equivalence & UCAS tariff

Cambridge Pre-U band	Cambridge Pre-U grade	Approximate raw % score	Pre-U Principal Subject UCAS tariff	Equivalent A-level UCAS tariff
Distinction	1	82%	t.b.c.	
	2	74%	145	(A*) 140
	3	65%	130	(A) 120
Merit	1	59%	115	(B) 100
	2	53%	101	(C) 80
	3	47%	87	(D) 60
Pass	1	42%	73	(E) 40
	2	38%	59	
	3	33%	46	

Distinctive approaches

- Van Arkel diagrams
 - shows gradation in bonding (& structure) for binary compounds
 - relates to electronegativity of constituent elements.
- Functional group level
 - simple classification of compounds based on number of bonds from carbon to electronegative atom
 - reduction, oxidation, substitution/hydrolysis/condensation.
- Orbitals
 - orbitals in molecules; antibonding orbitals
 - leads on to mechanisms & spectroscopy.

Other distinctive topics

- Crystal structures
 - CCP & HCP; unit cells; octahedral & tetrahedral holes.
- Time-of-flight mass spectrometry
- NMR of spin-½ nuclei
 - ¹³C, ¹H (incl. coupling); ¹⁹F, ³¹P *etc.*
- Entropy
 - understand microscopic principles (B1.5a).

Resources

- Cambridge websites
 - Teacher Support <http://teachers.cie.org.uk/>
 - Chemistry forum
- Teacher Guide
- Example candidate response booklet
- Recommended textbooks & resources

Teacher Support

TeacherSupport

Curriculum resources for teachers of Cambridge qualifications

Search: 10 links to other sites: [Help](#)

Home

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Community

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Add to MyShortcuts

Chemistry

and currently in your syllabus

Syllabus Shortcuts

You have not specified any syllabus shortcuts

Syllabus Shortcuts are links to the syllabus resources on this site

Pre-U: Chemistry (9701)

Syllabus Materials

Teaching Materials

Resource List

Resources

The syllabus year refers to the year in which the examination will be taken.

2013-2015 Syllabus (4140)

2016-2018 Syllabus (4140)

Exam & Exam Materials

2013-2015

2016-2018

2019-2021

June 2013

June 2013 Examinations Report (17040)

June 2013 Grade Thresholds (13002)

June 2013 Question Paper 1 (26685)

June 2013 Paper 1 Mark Scheme (13003)

Syllabus Updates

Download this syllabus for advance notice of changes to our syllabus.

Syllabus Updates 2013 (13100)

There are 3 Community Resources related to this subject and more have been submitted.

Publications


Publications

Publications

Publications

Publications


<http://teachers.cie.org.uk/>



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Chemistry forum

Forum Index > Chemistry Forum

Get all topics we need

new topics

1 2 3 ... 17 18 19 ... 20

Type	Replies	Author	Views	Last message
New Resource from CIE - Practical and Alternative to Practical	39	CIE Admin	3403	26/01/2014 12:02 Sally Jane
Online Professional Development courses January 2014	0	CIE Admin	71	04/12/2013 11:44 CIE Admin
Global web conferences 2013-14	0	CIE Admin	45	18/11/2013 11:40 CIE Admin
Have you seen the Syllabus Updates for Cambridge Schools 2013?	2	Tony Tooth	281	19/10/2013 11:08 Tony Tooth
Pre-U Teacher Guide	0	Clerk Wilkes	90	28/08/2013 15:40 Clerk Wilkes
June 2013 Ask the Examiner web conference!	0	CIE Admin	140	25/07/2013 11:02 CIE Admin
Coursework Sampling	0	Tony Tooth	198	27/04/2013 11:02 Tony Tooth
Pre-U Chemistry Revision: Schools consultation & please read and respond!	0	Mike Thompson	280	28/02/2013 09:06 Tamsin Walker
Announcement from CIE - Uploading Past Question Papers	0	CIE Admin	1642	18/11/2009 12:49 CIE Admin
CIE courses	0	Peter Carr	1140	07/06/2009 08:04 Aster Carr
Posts intended for direct communication with CIE	0	Hannah Peirn	191	22/11/2012 18:03 Hannah Peirn

<http://teachers.cie.org.uk/community/forum/>

6

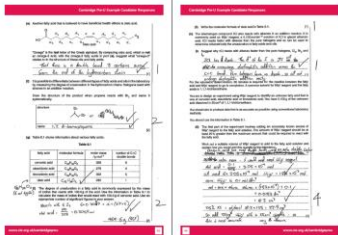
Teacher guide

- Suggested teaching orders (schemes of work)
 - One-teacher & two-teacher models
- Suggested experiments & activities
- Background information on distinctive approaches & topics

<http://teachers.cie.org.uk/docs/dynamic/65778.pdf>



Example candidate response booklet



<http://teachers.cie.org.uk/docs/dynamic/47471.pdf>

Suggested text-books

- suggested by teachers



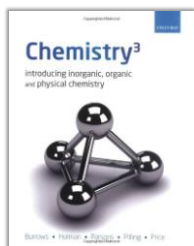
Cambridge International A-level
Chemistry coursebook (CUP)
Chemistry (Hodder, 2014)



Cambridge Pre-U
Chemistry Pre-U
Pre-U Chemistry Revision Guide



Additional support material



- Chemistry³
(Burrows *et al.*, OUP)

Any questions?

- Remember the Teacher Support site & the
online Chemistry Forum
<http://teachers.cie.org.uk>

Reminders

- How to keep in touch...
- info@cie.org.uk
- For more information about future courses
please go to the training events calendar at
www.cie.org.uk