UCAS

helping students into higher education

EXPERT GROUP REPORT FOR AWARD SEEKING ADMISSION TO THE UCAS TARIFF

Cambridge Pre-U Diploma

Jill Johnson & Dr Geoff Hayward
August 2008

CONTENTS **PAGE**

LIST OF TABLES **PAGE**

LIST OF FIGURES PAGE

THE CONDUCT OF THE COMPARABILITY STUDY

In order to ensure a robust and transparent procedure for allocating UCAS Tariff Points to qualifications seeking admission to the framework, UCAS approached the University of Oxford, Department of Educational Studies for assistance in developing an appropriate methodology.

Acknowledging the problematic nature of comparability studies, and recognising that a mechanical procedure would not work, the Department proposed a procedure based on the premise that such comparisons can only be achieved through the exercise of collaborative judgement by an Expert Group.

Guidelines were drawn up for the composition of the Expert Group, the evidence that would need to be collected and examined and the choice of a benchmark qualification.

Procedures were developed for the conduct of the work of the Expert Group, including detailed sets of questions to be addressed at different stages in the process. Questions appropriate to the awards under consideration are selected and are used to guide, not constrain, the work of the Expert Group.

The judgements made by the Expert Group in this report are presented as suggested allocations of UCAS points which take account of the size and demand of the award seeking admission to the Tariff, and a candidate's level of attainment within that award. The guidelines also provide for an automatic review process to be conducted at a later stage in the light of further evidence. This latter point acknowledges the fact that both benchmark qualifications and those seeking admission to the Tariff may still be relatively new. Consequently there may only be a relatively small amount of evidence (particularly candidate evidence) available at the time of the work of the Expert Group. There is, therefore, a need to review the decisions of the Group when more evidence becomes available and when HE admissions tutors have gained more experience of using the awards as entry qualifications.

The work of the Expert Group is subject to a quality assurance procedure by an independent auditor from higher education.

SUMMARY AND RECOMMENDATIONS

Global Perspectives and Independent Research Report

At the end of the Expert Group meeting no recommendation was made for the allocation of UCAS Tariff points. To derive such a recommendation it was agreed that we follow the grade alignments recommended by QCA and corroborated by CIE[1]:

- D3 to align with the A/B boundary
- P3 to align with the E/U boundary
- D2 is then intended to align with the A*.

As a result, two judgemental points were fixed as a starting point – the A/B (120 UCAS Tariff points) and the E/U (40 Tariff points) boundaries. However this is a 'volume free' measure and consideration needed to be given to the size of the GPR relative to a GCE A level. In terms of learning hours, Global Perspectives (GP) = 200 (56% of an A level) whilst the Independent Research (IR) = 120 (33%). The combined total of 320 Guided Learning Hours (GLH) thus equates to 89% of an A level. This would result in GPR grade D3 being allocated 107 UCAS Tariff points.

However, Expert Group felt that the IR component provided highly valuable skills for HE study, as per the Extended Project (EP) and that a greater weighting should be given to the GLH for IR. On the basis of a review of the all the available evidence the recommendation is that the GPR component has slightly greater utility for supporting progression to HE than signalled by an allocation of 120 UCAS Tariff points. This additionality can be best represented by taking account of the extra volume of the Global Perspectives component and fixing the D3 value at 126 UCAS Tariff points. The P3 value would then be 42 UCAS Tariff points. Other values between D3 and P3 can be established by interpolation, with the value for D2 found by extrapolation, based upon the agreed relationship between D2 and A*.

As with the Principal Subjects, no extra allocation of UCAS Tariff points will be made to D1 until such time as candidate evidence and a grade profile of candidates becomes available.

[1] The mechanism to peg particular grades of the Pre-U GPR to the GCE A levels are: (a) to use archived A level exam scripts in the first instance to align the A level and the grades in the Principal subjects of the Pre-U and then (b) link the Independent Research Report (IR) and Global Perspectives' (GP) grade boundaries at D3, M3 and P3 to the Principal Subjects via syllabus pairs analysis and prior attainment data. This process has been approved by the regulator, the QCA.

Table 1: Recommended UCAS Tariff points allocations to the GPR component

Pre –U Grade	A level Grade	UCAS Tariff points	Comments
D1			
D2		140	
D3	A/B	126	Judged alignment using archived scripts and other evidence
M1		112	
M2		98	
M3		84	
P1		70	
P2		56	
P3	E/U	42	Judged alignment using archived scripts and other evidence

Pre-U Diploma Principal Subjects

All subject groups used the grade alignment agreed by QCA (Pre-U D3/M1 boundary = GCE A Level A/B boundary; Pre-U P3 = A Level E/U boundary) as the starting point for recommending the allocation of UCAS Tariff points.

Biology

The HE representatives felt that it would be easier to compare lower-achieving candidate grades with each other and discussed whether a candidate at the bottom of grade E would be bettered prepared with the Pre-U qualification than an A Level candidate. The conclusion was that a Pre-U candidate would have more practical skills, know about the origin of life and have an ability to be able to summarise knowledge.

The HE representatives worked on the principle that poorer performing candidates on Pre-U would be almost 10 per cent 'better' than poorly performing A Level candidates. Given that a candidate achieving a D at A Level would attract 60 Tariff points, a Pre-U candidate achieving P2.should be given 65 UCAS Tariff points.

The Group assumed that an A Level grade A would be equivalent to D3 (subject to an extra 10 per cent utility) and then deduced the other grades by using a linear regression equation (y=13.75x + 37.5) to make the recommendations in Table 2.

Economics

The Expert Group members reviewed a series of factors which might influence the determination of such a multiplier eg size, content, assessment demand and domain scoring.

While acknowledging that there were differences in size and content of around 5-6%, and respecting QCA's judgments, the HE representatives nevertheless considered

that in terms of utility for progression to HE, there were no significant grounds to give the Pre-U a different weighting to GCE A Level, and therefore recommended that:

- No multiplier should be introduced
- The Tariff points score should be awarded on the basis of D3 = 120 points and P3 = 40 points
- There should be a mathematical allocation of points to the other grades as in Table 2.

French

The Expert Group did not initially agree on the size of the Principal Subject, with opinions ranging from both qualifications being the same size to the Principal Subject being 20% larger than the A level. HE representatives tended to suggest that the Pre-U Principal Subject was larger.

Each HE representative was asked what difference the assessment of demand as conducted above should make to potential UCAS Tariff points. However, the feeling was that because of the skills-based nature of French as a subject, it had been impossible to separate out volume of learning as a discrete entity, and that in arriving at the initial determination of size, demand had almost inevitably been included.

The HE representative who had initially gone with 20% confirmed that demand had indeed been included in that assessment. The second representative who had moved from 15% to 20% confirmed that his assertion too had taken account of demand, and the third representative, who had valiantly tried to separate size from demand, confirmed that the evidence generated in discussion on demand, had moved his figure up to 20%. In the light of this confirmation, both Chief Examiners declared they were content, although the A Level representative indicated that he would still prefer a figure of 10%.

It was finally agreed that for the Principal Subject a multiplier of 1.2 should be applied to all grades.

Mathematics

The Expert Group agreed that any differences in utility between the two qualifications were most clearly established in terms of assessment demand, with the Pre-U having scored somewhat more highly, particularly in providing the more demanding questions and opportunities for synopticity. This added to a possible increased demand associated with a linear rather than a modular assessment model, and gave the potential for the Pre-U to have greater utility.

- Overall the Higher Education tutors agreed that the Pre-U did provide more discrimination at the high- performance end of the range; less at the low-

performance end. It would be valuable in discriminating amongst students for progression to Higher Education, although there was a need to consider candidates progressing to subjects other than Mathematics who might cope less well with the increased demand. After considerable discussion, an overall multiplier of 1.05 was agreed

Principal Subjects recommendations

Table 2 summarises the UCAS Tariff point values allocated to the Pre-U Principal Subjects by the four expert groups. Values for the other grades of the Pre-U Principal subjects can be found by interpolation and extrapolation. Such variation in outcome is not unexpected, reflecting differences in the construction of specifications and value judgments made by the Expert Groups about the utility of the content and attainment in the Pre-U Principal Subjects relative to the GCE A level for supporting progression to Higher Education.

Table 2: Proposed allocation of Tariff points by the Expert Groups

Pre-U Grade	Biology	Economics	French	Mathematics
D1	159	146	176	146
D2	145	133	160	133
D3	132	120	144	120
M1	119	103	128	103
M2	105	93	112	93
M3	92	80	96	80
P1	78	66	80	66
P2	65	53	64	53
P3	52	40	48	40

In three cases, the Expert Groups (the exception was biology) started from a baseline allocation of UCAS Tariff points drawn from the grade alignment agreed with QCA. In the absence of candidate evidence the recommendation is that the allocation of UCAS Tariff points should be based on these base line figures.

With the exception of economics, Expert Groups agreed that the Pre-U Principal Subjects had extra content that increased their utility for supporting progression to higher education. The fairest way of reflecting that additional utility at this stage, and in the absence of candidate evidence, is to use the agreed Guided Learning Hours (GLH) for the Pre-U, set at 380 GLH. This is 5.5% more than a GCE A level, set at 360 GLH. Multiplying the values in Table 2 by 5.5% would lead to an allocation of 127 UCAS Tariff points to D3 and 42 to P3. The recommendation is that these values should be rounded up to 130 and 45 respectively to reflect the critical nature of the terminal assessment of the Pre-U Principal Subjects. Other values between D3 and P3 can then be found by interpolation. D2 in the Pre-U is supposed to align with A*. There is, therefore, a justifiable reason to extrapolate a value for D2 over and above D3. However, there is currently no evidence to establish the value for D1. Consequently, the recommendation is that this grade should attract no extra value above D2 until such time as the grade profile of candidates and evidence of the

quality of their work is available in 2010, when the whole qualification will be reviewed.

The recommended allocation of UCAS Tariff points is shown in Table 3. This is a cautious solution and one that reflects the range of variation in the allocation of UCAS Tariff points. The allocation at P3 is lower than that recommended by the biology Expert Group. While this Expert Group did provide a justification for their higher allocation of UCAS Tariff points to lower grades in the Pre-U it is not a particularly robust one, especially given the lack of candidate evidence. Therefore, their rationale, though an interesting one, has been discounted at this stage.

Table 3: Allocation of UCAS Tariff points to Pre-U Principal Subjects

Pre –U Grade	**A level Grade**	**UCAS Tariff Points**	**Comments**
D1			
D2		145	
D3	A/B	130	Judged alignment using archived scripts and other evidence
M1		115	
M2		101	
M3		87	
P1		73	
P2		59	
P3	E/U	45	Judged alignment using archived scripts and other evidence

Pre-U Short Course

The French group was unanimous in their view that the short course was equivalent to an AS level in size and demand. Therefore the D3 grade should be set at 60 UCAS Tariff points and the P3 at 20. Values for intermediate grades can be found by interpolation. Given that there is no A* grade at AS the values for D2 cannot be extrapolated with any degree of confidence. Consequently the recommendation is that neither the D2 nor the D1 grades in the short course subjects should attract any additional UCAS Tariff points at this stage. Table 4 summarises the recommendations for short courses.

Table 4: Recommended Tariff points for Short Courses

Grade	D1	D2	D3	M1	M2	M3	P1	P2	P3
UCAS Tariff points	-	-	60	53	46	39	32	26	20

UCAS Board recommendations

All recommendations were endorsed by the Tariff Reference Group and Tariff Advisory Group and formally approved by the UCAS Board in December 2008. The agreed UCAS Tariff points for Cambridge Pre-U are summarised in Table 5.

Table 5: Agreed UCAS Tariff points

Grade	Global Perspectives and Research	Principal Subject	Short Course
D1	To be confirmed	To be confirmed	To be confirmed
D2	140	145	To be confirmed
D3	126	130	60
M1	112	115	53
M2	98	101	46
M3	84	87	39
P1	70	73	32
P2	56	59	26
P3	42	46	20

In the absence of an equivalent grade to D1 in GPR, Principal Subject and Short Course and the lack of an A* grade in AS, it was further recommended that these points should be reviewed as soon as sufficient candidate evidence becomes available.

SECTION 1: THE COMPOSITION OF THE EXPERT GROUPS

The following individuals with expert knowledge and experience of the qualifications under consideration in this study were selected to form the Expert Groups:

Global Perspective and Independent Research Report

- Steve Adams, Acting Principal Examiner for IRR, CIE
- Rachel Bettley, Development Officer, CIE
- Mr Fred Cartmel, Sociology Anthropology and Applied Social Sciences Adviser of Studies, Senior Lecturer, University of Glasgow
- Dr Hywel Davies, Director of Admissions and Recruitment, Aberystwyth University
- Martin Jones, Product Manager, CIE
- Jo Lally, Acting CE for GPR, CIE
- Lucinda Rumsey, Tutor for Admissions, Mansfield College, University of Oxford
- Patrick Walsh-Atkins, Moderator Extended Project Qualification, AQA
- David Walton, Chief Examiner AQA General Studies A, AQA
- Stuart Whitwell, Acting Principal Examiner for GP, CIE

Biology

- Richard Fosbery, Chief Examiner, CIE
- Dr Harriet Jones, Lecturer, School of Biology, University of East Anglia
- Mary Jones, Principal Examiner, CIE
- Dr Ian Kay, Admissions Tutor for Biology and Health Science, Manchester Metropolitan University
- Rick Nelms, Product Manager, CIE
- David Slingsby, Edexcel
- Dr Martin Speight, Organising Secretary for Biological Sciences, University of Oxford

Economics

- Alain Anderton, Chair of Examiners - Economics, AQA
- Professor Mike Clements, Admissions Tutor for Economics, University of Warwick
- Mark Dowling ,Deputy Director Assessment Services ,CIE
- Dr John Hunter, Admissions Tutor for Economics, Brunel University
- Andrew Ireson, Chief Examiner, CIE
- Laurence Lasselle, Admissions Officer, School of Economics & Finance, St Andrews University

-

French

- Dr Ana de-Medeiros, Admissions Officer, French, University of Kent
- Alec Johns, Chair of Modern Languages , OCR
- Geran Jones, Chief Examiner, CIE
- Dr Andy Martin, University Lecturer in French , Cambridge University
- Dr Guy Snaith, Lecturer in French, University of Liverpool
- Jane Webber, Group Manager, CIE

Mathematics

- Nigel Backhouse, Chief Examiner, CIE
- Dr Sally Barton, School of Mathematical Sciences, University of Nottingham
- Neil Buckley, Chair of Examiners for GCE Mathematics, AQA
- Dr Chris Coles, Senior Lecturer and Academic Selector, Department of Mathematics, University of Strathclyde
- Amanda Radford, Product Manager, CIE
- Dr Jonathan Robbins, Reader in Applied Mathematics and Admissions Tutor, Bristol University

UCAS staff acted as facilitators and secretaries for the work of the Groups, ensuring that the Groups worked systematically through the procedures.

The whole process was overseen and quality assured by Dr Geoff Hayward, an independent higher education based consultant.

In addition to the experts mentioned above, Anthony Dawson, Gillian Whitehouse and Val Sismey from CIE were also in attendance. Jacqui Spatcher, Head of General Qualifications and Functional Skills Division at Department for Children, Schools and Families also attended the final sessions.

CVs of the experts within the groups are attached as Appendix 1.

SECTION 2: OVERVIEW OF THE AWARDS SEEKING UCAS TARIFF SCORE

2.1 Aims and purpose of the qualification

The Cambridge Pre-U Diploma aims to equip students with the skills required to make a success of their subsequent studies at university, involving not only a solid grounding in each specialist subject at an appropriate level, but also the ability to undertake independent and self-directed learning and to think laterally, critically and creatively.

The Cambridge Pre-U curriculum is underpinned by a core set of educational principles:

- A programme of study which supports the development of well-informed, open and independent-minded individuals capable of applying their skills to meet the demands of the world as they will find it and over which they may have influence
- A curriculum which retains the integrity of subject specialisms and which can be efficiently, effectively and reliably assessed, graded and reported to meet the needs of universities
- A curriculum which is designed to recognise a wide range of individual talents, interests and abilities and which provides the depth and rigour required for a university degree course
- A curriculum which encourages the acquisition of specific skills and abilities, in particular the skills of problem solving, creativity, critical thinking, team working and effective communication
- The encouragement of 'deep understanding' in learning – where that deep understanding is likely to involve higher order cognitive activities.
- The development of a perspective which equips young people to understand a range of different cultures and ideas and to respond successfully to the opportunity for international mobility.

Within the common Cambridge Pre-U criteria, each subject syllabus approaches its subject with a commitment to maintaining and enhancing its academic integrity, student interest and contemporary relevance. Syllabus teams have taken the opportunity to introduce new and cutting-edge topics which underscore their subjects' relevance. Assessments are not generic but are closely tied to the nature of the subject, with assessment methods and criteria selected on the basis of fitness for purpose for each individual subject.

In addition to the aims that run through and inform the Cambridge Pre-U subject syllabuses, the full Cambridge Pre-U Diploma seeks to add value in terms of coherence, depth and breadth, through:

- Providing a platform for subject specialisation
- Allowing candidates choice to tailor programmes to meet their individual needs
- Encouraging focused personal exploration and increased depth of study through the Independent Research Report
- Expanding creative, critical and responsible awareness through the tackling of global issues in Global Perspectives.

Cambridge Pre-U offers the advantages of a Diploma structure while maximising permissiveness in allowing candidates to tailor their own programme to suit their interests, enthusiasms and expertise. Cambridge Pre-U raises the individualised learning agenda to a new level.

While the Cambridge Pre-U Diploma is rooted in subject specialism, through its core components it develops the skills necessary to deal with the complex, connected and rapidly changing world in which candidates live, study and work.

Thus the Cambridge Pre-U Diploma harnesses academic rigour to a passion for problem-solving and engagement, grounding specialist knowledge in cross-border commonality and shared responsibility.

Within the Cambridge Pre-U Diploma structure, there are two common core components that add value to a candidate's programme:

Global Perspectives

Aims to

- Prepare candidates for engagement in a rapidly changing intellectual environment, by:
  - Promoting a critical, questioning approach to information that is often taken for granted
  - Developing and promoting disciplined and scholarly research methods
  - Cultivating an interdisciplinary perspective

- Encourage candidates to engage constructively with issues and ideas of global significance, thus:
  - Developing an understanding of some of the key global problems and opportunities that will face them as adults, wherever they live and work

- Fostering awareness and understanding of, and respect for, the diversity of perspectives on particular global issues
- Encouraging an independent outlook and self-reflection through scrutiny of a priori assumptions

Global Perspectives is a core component of the Cambridge Pre-U Diploma which adds:

- An introduction to critical thinking skills
- A practical application of rigorous research skills
- A chance to explore connections between academic subjects
- A focus on real-world challenges and opportunities.

Today's students live in a rapidly changing world, confronted by a multiplicity of competing ideas, arguments and information. Everyday interactions and the university studies of young people today promise to take them out of their intellectual comfort zone, away from the relatively secure world of sedate change and reception of received wisdom, and into an environment of competing ideas where perspectives are challenged and subject to change.

Global Perspectives seeks to develop the skills and cognitive frameworks that enable students to comprehend and interact positively with these changes. Positive engagement with this rapidly changing world of ideas, arguments and information constitutes a skill-set in itself, and involves the ability to follow and deconstruct arguments and assertions, to separate fact, argument and opinion, and to assess and evaluate claims.

Other essential skills involve knowing how to research and evaluate the reliability and usefulness of information, how to assemble, assess and handle evidence, and how to construct further arguments. Through an investigation of challenging topics, candidates will also develop skills in lateral and creative thinking in the resolution of dilemmas.

The need to be able to assess information and ideas critically and constructively is one that transcends academic subjects, yet is fundamental to developing as successful students in an increasingly globalised world. Global Perspectives prioritises these skills, but recognises that they cannot be taught in a vacuum, that they need to be developed within an authentic environment of real-world challenges and debates. The content base of the syllabus is drawn from some of the key issues around which ideas, arguments and information revolve in today's world. Researching the contexts and examining the premises of established perspectives will broaden understanding, sympathy and tolerance, while offering candidates the chance to develop their own points of view. The outcome of the course is intended to

be transformative, providing young people with the skills needed to structure and shape their understanding in a rapidly changing world.

The Independent Research Report

Aims to:

- Prepare candidates for a way of working in Higher Education:
  - Promoting familiarity with the research conventions current in higher education; understanding of the different modes of research enquiry; readiness to reflect critically and respond to review; a capacity for autonomous study and self-management

- Develop generic and higher order skills of research and analysis:
  - Including the ability to design research proposals; understanding and planning data collection methods; ability to interpret, analyse and base conclusions on results; ability to communicate complex findings

- Encourage intellectual curiosity:
  - Providing the means of acquiring a deeper knowledge and understanding of the subject matter of the research
  - Thus the candidate will carry on to Higher Education not just high order study skills, but enhanced knowledge of the subject, and a more widely applicable self-discipline in independent self-study.

The Cambridge Pre-U Diploma will constitute evidence that a candidate has specialised in at least three specified subjects, has shown the ability to research and communicate at depth in a chosen subject, and in addition has shown skills of critical thinking, reflection and empathy with regard to key contemporary issues and debates.

Cambridge Pre-U seeks to assess a candidate's knowledge, understanding and skills in the context of particular academic subjects. However, each of the subject syllabuses also promotes the development of generic study skills.

2.2 History of the qualification

Cambridge Pre-U arose out of discussions with schools and universities, beginning in 2005. Following publication of an initial discussion paper, extensive consultation gave rise to the development of an umbrella Diploma-style qualification, consisting of three Principal Subjects (from a choice of 26 subjects) and a core component, Global Perspectives and Independent Research Report.

The syllabuses were developed by subject teams led by practising teachers, supported by representatives from HE and subject associations. Universities were consulted at subject and whole qualification level, at every stage in the process.

The qualification was submitted to QCA for accreditation 2007-8, and was trialled in the same time-period. Cambridge Pre-U will be taught from September 2008, with first full award in 2010.

The term 'Cambridge Pre-U' is an abbreviated term that has come to be used as an umbrella term to describe the parts (Principal Subject, Short Course, GPR) as well as the whole (Diploma).

2.3 Entry requirements for the qualification

Cambridge International Level 3 Pre-U Diploma builds on the knowledge, understanding and skills typically gained by candidates taking Level 2 qualifications. It is recommended that candidates have attained communication and literacy skills at a level equivalent to IGCSE/GCSE Grade C in English.

2.4 Age of candidates

Normally candidates will be in the UK year 13 and approximate age 17 / 18 years old.

2.5 Guided Learning Hours

Each Principal Subject has attracted 380 guided learning hours. The Diploma consists of 3 Principal Subjects or A Level equivalent thus 3 x 380.

Global Perspectives has attracted 200 guided learning hours and the Independent Research Report 120.

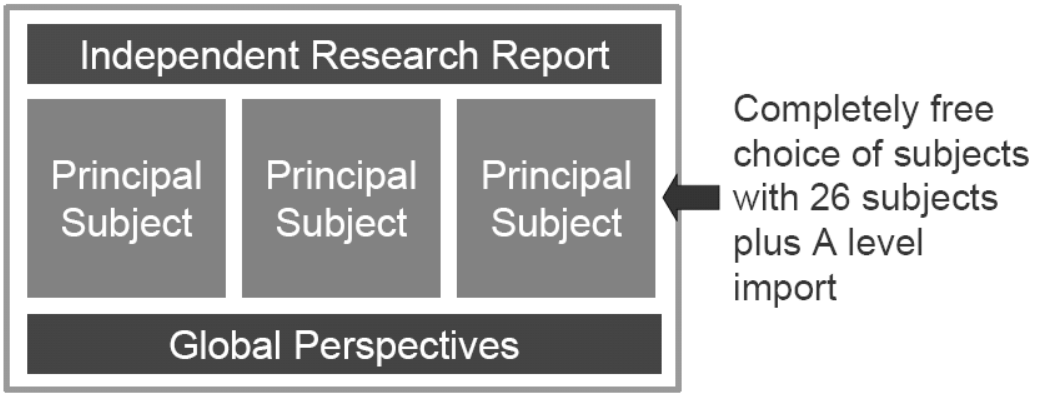
Thus the overall total for the diploma is 1460 GLH.

2.6 Content and structure of the qualification

Candidates qualify for the full Cambridge Pre-U Diploma if they pass:

- Three Cambridge Pre-U Principal Subject Certificates
- Global Perspectives
- Independent Research Report

Figure 1: Structure of Pre-U Diploma



Principal Subjects: in-depth subject specialism

There is no upper limit on the number of Principal Subjects candidates may take. Only three are included in the Diploma award but all subjects receive a separate grade so students will receive credit for the full extent of their academic programmes.

Other qualifications may be credited within the Diploma, where tariff values can establish a clear equivalence. For instance, a candidate may substitute up to two A Levels in place of Principal Subjects. The Principal Subject courses are two years long and all Principal Subject examinations take place at the end of the course. Candidates may take any combination of the following subjects to suit their interests, enthusiasms and expertise:

Mathematics, Further Mathematics Physics, Chemistry, Biology, Comp. Gov. & Politics, Economics , Business & Management , Italian , French , German, Russian, Spanish, Mandarin Chinese, Music, Philosophy & Theology, Geography, Psychology, Art and Design, History of Art, History, Classical Heritage, Latin, Greek, Literature in English and Sport Science.

Using other qualifications within the Diploma

To allow for programmes that combine other qualifications with Cambridge Pre-U, candidates are permitted to substitute up to two Principal Subjects within the Diploma. Qualifications that can be used instead of Principal Subjects must be QCA or SQA accredited at Level 3 and carry a maximum UCAS Tariff score for the qualification of at least 120 points.

Note that no substitutions will be permitted for Global Perspectives or the Independent Research Report. The points score for qualifications imported into the Diploma will be established through equivalence in the UCAS tariff. Candidates importing a qualification that has a lower maximum UCAS tariff than the Pre-U

Principal Subjects will not have access to the points equivalent of the highest Pre-U grades.

Content

The content for the Principal Subjects and the Global Perspectives and the Independent Research Report can be found in the templates for those specific parts of the qualifications and are not replicated in this document.

2.7 Assessment – procedures, methods and levels

Assessment Outline

Cambridge Pre-U seeks to assess a candidate's knowledge, understanding and skills in the context of particular academic subjects. However, each of the subject syllabuses also promotes the development of generic study skills.

The Independent Research Report assesses some generic study skills at a high level, while also giving credit for advanced subject (and where appropriate interdisciplinary) knowledge and understanding.

The Global Perspectives component of the Cambridge Pre-U Diploma seeks directly to assess generic skills and dispositions relating to critical thinking and enquiry.

Table 6: Pre-U Assessment Objectives

Assessment Objective	Detail	Subject Syllabuses	Global Perspectives	Independent Research Report
Knowledge	Subject-specific	*		*
	Cross-curricular			*
Understanding	Subject-specific	*		*
	Cross-curricular			*
Skills	Subject-specific	*		
	Generic study skills	*	*	*
Dispositions	Interdisciplinary Self-reflective Critical thinking		* * *	* *

Global Perspectives Scheme of Assessment

Global Perspectives will be assessed through three components, each covering specific tasks identified within the critical path.

Component Task Assessment Weighting

Table 7: Pre-U Global Perspectives assessment weighting

Component	Task	Assessment	Weighting
01	Deconstruction	Written Paper 1 hour 30 minutes duration	25%
02	Reconstruction and Reflection	Essay of max 1500 words externally assessed	30%
03	Presentation	Multi-media presentation max 15 mins running time externally assessed.	45%

Components 02 and 03 are submitted in electronic form and marked by CIE. Work must be submitted to CIE by 31st April for assessment in the June session.

Guidance on appropriate formats and procedures for the submitted work will be provided. Centres are strongly advised to retain securely either a hard copy or an electronic copy of the complete submission.

Global Perspectives Assessment Objectives

The relationship between the assessment objectives and the components of assessment is shown in the specification grid below. The assessment objectives are to some degree inter-dependent. It is not, therefore, feasible to assess them discretely. Accordingly, the weightings indicated in the tables below are approximate:

Table 8: Pre-U Global Perspectives Assessment Objectives

Component	AO1	AO2	AO3	AO4	Total
Paper	15%	7.5%	2.5%	-	25%
Essay	3%	12%	3%	12%	30%
Presentation	9%	9%	13.5%	13.5%	45%
Total	27%	28.5%	19%	25.5%	100%

Independent Research Report

The Independent Research Report submission must comprise:

- A single piece of extended writing in the form of a dissertation or a report based on an investigation or field study normally comprising between 4,500 and 5,000 words. Where a project has involved extensive field study, manipulation of data, or laboratory experiment, the resulting report length may fall below these guidelines. Alternative forms of submission will not be accepted.

- CIE form completed by the tutor. This form provides a means for tutors to track the candidate's progress in developing and producing the Independent Research Report and will assist in the process of authenticating that the Report is the candidate's own original work.

Table 9: Pre-U Independent Research Report Assessment Objectives

			Weighting	Mark allocation
AO1	Knowledge and understanding of the research process	Design, plan, manage and conduct own research project using techniques and methods appropriate to the subject discipline	15%	9
AO2	Analysis	Select, assess and synthesise information, concepts, arguments and evidence from a range of source material	30%	18
AO3	Evaluation	Evaluate alternative perspectives and interpretations and make independent reasoned judgements, demonstrating the capacity to reflect on own learning and achievement	30%	18
AO4	Communication	Communicate clearly in negotiating and conducting the research project, and in presenting own research, interpretations and judgements, using appropriate format and conventions	15%	9
AO5	Intellectual challenge	Demonstrating additional skills, knowledge or understanding that shows particular intellectual engagement with the subject of the report.	10%	6
			100%	Total 60 marks

Level

All Cambridge Pre-U syllabuses are linear. A candidate taking a Principal Subject must take all the external examination components for that subject together at the end of the two-year course in one examination session.

The Cambridge International Level 3 Pre-U Certificates in the Principal Subjects are qualifications in their own right.

Each individual Principal Subject is graded separately on a scale of nine grades: D1 (Distinction 1), D2, D3, M1 (Merit1), M2, M3, P1 (Pass 1), P2, P3. These grades are reported on a separate certificate to the Diploma itself.

Aggregation

Each component is awarded a score, as shown in Table 5 below. These scores are then summed to create a single score for the Diploma as a whole.

2.8 Grading

The Pre-U Diploma score

The Cambridge Pre-U Diploma does not have grades. Instead, results are reported as a Pre-U diploma score from 32 to 96.

The diploma score is aggregated from the grades achieved in the components which make up the diploma (three Cambridge Pre-U Principal Subjects, Global Perspectives, and the Independent Research Report). Each grade achieved contributes points to the Pre-U diploma score as indicated in the table below.

Table 10: Pre-U component scores

Contribution of each component to the Diploma score			
Grade	**Principal Subjects**	**Independent Research Report**	**Global Perspectives**
D1	24	12	12
D2	22	11	11
D3	20	10	10
M1	18	9	9
M2	16	8	8
M3	14	7	7
P1	12	6	6
P2	10	5	5
P3	8	4	4

The Pre-U diploma score is the sum of the points scored on the five components.

To pass the Diploma a candidate must achieve at least P3 in all five components, which means that the minimum Pre-U diploma score is 32. Candidates who score less than this, or who score 32 or more points but fail one or more of the five components, will receive a U (unclassified) on their statement of results and will not receive a Pre-U certificate.

The maximum Cambridge Pre-U diploma score is 96, which is achieved by a grade D1 in all five components.

Where candidates “import” A Levels or other qualifications in place of one or two Pre-U Principal Subjects, the UCAS tariff of the grade achieved on the imported qualification will be used to establish an equivalent grade on a Pre-U Principal Subject, and hence an equivalent number of points to contribute to the diploma score. No one imported qualification will contribute more than 24 points to the Pre-U diploma score.

Where candidates have taken more than three Principal Subjects or equivalent, then the highest-scoring combination of three subjects (which includes at least one Pre-U Principal Subject) will be used to calculate the diploma score.

Grading the components of the Pre-U diploma

For Pre-U Principal Subjects, Global Perspectives and the Independent Research Report, the "judgemental" grade boundaries will be set based on a combination of professional judgement and statistical evidence, including trend data and candidature profile. In the first year of the qualification, when standards are established for the first time, the professional judgements of the Principal Examiners will be informed by A Level scripts at the boundaries of grades A, C and E, provided by OCR.
At the level of individual papers, there will be three passing grades and a grade U (unclassified). The passing grades are distinction, merit and pass. All three grade boundaries are judgemental boundaries.

At syllabus level, there are nine passing grades, and a grade U (unclassified) for candidates whose performance fails to reach the minimum standard required. The nine passing grades are D1, D2, D3, M1, M2, M3, P1, P2 and P3, where D stands for distinction, M for merit and P for pass.

The grade boundaries for grades D3, M3 and P3 will be obtained by aggregating the (judgemental) distinction, merit and pass grade boundaries for the papers. The grade D1 boundary will be a judgemental grade boundary, and will be set at syllabus level by considering the work of candidates on all papers together. The intermediate grade boundaries (i.e. those for grades D2, M1, M2, P1 and P2) will be derived arithmetically.

The standards of the Pre-U will be linked to UK A Level standards so that the standard of performance required for the award of a grade D3 will be equivalent to that required for an A Level grade A, and the standard of performance required for the award of a grade P3 will be equivalent to that required for an A Level grade E. The standard required for a Pre-U grade D1 will be higher than that required for an A Level grade A*.

Further details on the principles and methods of grading are available.

2.9 QA Systems and code of practice

All aspects of the examination process are subject to the University of Cambridge International Examinations (CIE) code of practice. CIE's practices and procedures are closely related to those of the UK awarding bodies, having been derived from the Regulators' Code used by UCLES and other English awarding bodies when CIE was created as a separate unit within UCLES in 1998.

In accordance with the CIE code of practice, any person connected with the development of question papers, with the marking or moderation of candidates' work,

or with the grading process must declare an interest in any candidate with whom they have a connection.

Extensive and rigorous processes are in place to ensure that high standards are adhered to in the stages of Syllabus Development, Question Paper Development, Marking and Moderation, and Grading and Grade Review. Since the Pre-U Diploma is an aggregation of component parts, the brief descriptions of these processes which follow are applicable to the component parts of the Diploma rather than to the diploma itself.

Syllabus Development

Each subject syllabus has been written by a team of practising teachers, supported by university lecturers and other subject specialists. Drafts have been the subject of extensive consultation with schools, subject associations and universities. The syllabuses have been scrutinised by experienced assessment personnel from within CIE, and have been accredited by QCA. Any future revisions to the syllabuses will be subject to similar levels of consultation and scrutiny.

Question Paper Development

A setter (who is usually the Principal Examiner) prepares the first drafts of question papers (QPs). The first drafts are then considered by the Reviser, who is usually an experienced examiner. The Reviser's comments are incorporated by the Setter before the papers are subjected to a formal scrutiny process at a meeting of the Question Paper Evaluation Committee (QPEC). The final draft of the QP is produced after the QPEC meeting and typeset. After checking and proof-reading by CIE's product manager, the QP is sent for further scrutiny by the Vetter, who has not previously seen the QP. The QP is then sent for a final check to the Principal Examiner, who also ensures that the mark scheme is brought up to date with the QP.

Multiple choice papers follow a slightly different pattern. Items are written by item writers who are experienced examiners and/or teachers. Following scrutiny by a Reviser, the items are amended. They are then typed and stored in an item bank. Question papers are constructed by selecting items from the bank so that the paper complies with a specification relating to topics and skills. After this the paper is sent to a reviser for comment and is subjected to a formal vetting process at a Test Construction meeting. After checking and proofreading by CIE's product manager, the paper is sent for further review by a Vetter.

Marking and Moderation

Question papers are marked by panels of examiners headed by a Principal Examiner. The examiners provisionally mark a sample of their allocation of scripts before attending a co-ordination meeting. At the co-ordination meeting, the

examiners finalise the mark scheme, discuss its application to responses observed in provisional marking, and are trained in its interpretation and use. After the co-ordination meeting, examiners begin marking. The quality of their work is monitored at three stages during the marking period: immediately after the co-ordination meeting; mid-way through the marking period; and at the end of the marking period. Procedures exist for situations where examiners are inconsistent, consistent but inaccurate, or about whom there are lingering doubts.

Coursework and oral components of the assessment are moderated. CIE requests a sample of candidates' work from each Centre and a panel of moderators check that the Centre's marking of the work is consistent and accurate. The panel of moderators are standardised in a co-ordination meeting following procedures similar to those for a question paper. If a Centre's marking is found to be inaccurate, the marks may be scaled in order to bring them into line with marking from other Centres.

Grading and Grade Review

The grading meeting itself has been discussed briefly above.

CIE certificates the grades of candidates at the level of the whole syllabus. Following the grading meeting, candidates are identified who are thought to be at risk of receiving the wrong grade at syllabus level. The marking of the scripts of these candidates is then checked by senior examiners at a Grade Review meeting. Candidates whose scripts are checked include those who are close to a borderline and who have been marked by an examiner about whom there are lingering doubts, or whose grade is very different from their forecast grade, or who have performed very differently on different papers.

SECTION 3: OVERVIEW OF THE BENCHMARK AWARD

3A AQA GCE GENERAL STUDIES A LEVEL

3A.1 Aims and purpose of the qualification

It aims to allow candidates to:

- broaden their post-16 education by reinforcing and enhancing the subjects studied up to GCSE and being followed at AS/A Level
- encourage thinking about issues across specialist subjects in a multi- and inter-disciplinary way using the broad headings of Culture and Society and Science and Society
- enable candidates to consider and engage successfully with contemporary problems and issues and view them from a wider range of perspectives than those offered by subject specialisms
- integrate knowledge from a range of disciplines in order to develop an understanding of the interrelationship between them
- think logically and creatively in order to assess the relative merits of evidence, make informed judgements and reach justifiable conclusions.

Broad Objectives

AQA General Studies A is designed to complement other (specialist) studies and to be useful preparation for higher education, work and life in general. Through following the specification students will develop and improve their:

- knowledge and understanding of broader considerations and subject matter than specialist subjects often allow
- thinking and analytical skills
- capacity to evaluate and construct arguments and draw conclusions
- communication and presentation skills
- ability to work both independently and with others

3A.2 History of the qualification

General Studies is a very long standing A Level qualification which has existed in one form or another since 1959. It was designed to offset the traditionally narrow A Level curriculum based on three specialist subjects. It became fully established in the 1960s with some pioneering techniques making extensive use of multiple choice testing of knowledge, comprehension and some of the higher level skills of analysis and evaluation across a wide range of disciplines. Over the years it has inevitably undergone some changes, the most radical of which came in 2001 with the introduction of national subject criteria and the change to a modular A Level curriculum and examination based on six units, and most recently with the

subsequent reduction of units from six to four. Some of the discrete multi-disciplinary components have disappeared completely (e.g. foreign language comprehension and mechanical and spatial relations) in favour of a greater inter-disciplinary emphasis and the need to conform more closely to the national subject criteria. Whilst individual A Level subjects continue to exist the case for General Studies as a means of broadening the post-16 curriculum remains as strong as ever and AQA is now awarding its own Baccalaureate based on 3 A Levels plus General Studies and the Extended Project.

3A.3 Entry requirements for the qualification

AQA General Studies A builds on the knowledge, understanding and skills expected of candidates who have gained Level 2 qualifications. It is recommended that candidates have attained a level at least equivalent to GCSE Grade C in English, mathematics and science.

3A.4 Age of candidates

Normally candidates will be aged 16-19 in Years 12 (AS) and 13 (A2) of UK schools and colleges.

3A.5 Guided Learning Hours

AS GCE General Studies A requires **180** guided learning hours in total.
Advanced GCE General Studies A requires **360** guided learning hours in total.

3A.6 Content and structure of the qualification

Thinking, Analytical and Communication Skills

The skills, knowledge and understanding detailed below will be assessed in the context of the content statements set out in Tables 6 and 7 for Culture and Society and Science and Society.

The content statements should be interpreted in the light of the level of the knowledge, understanding and attainment of skills that a candidate might reasonably be expected to possess after following a broad range of subjects at GCSE Grade C level, including English, mathematics and science, and a two-year post-16 course in General Studies alongside other specialist AS and A Level subjects.

Table 11: AQA GCE General Studies A Level structure

Understanding the nature of knowledge, truth and belief and the distinctions between them	Examination of the way concepts such as knowledge, truth and belief are used; *demonstrate* the ability to draw distinctions between *and* recognise the impact of values upon them, understanding what constitutes 'proof'. Demonstrate appreciation of the limitations of knowledge.
Analysis of data, information, ideas, opinions and arguments	*Evaluation* of sources of knowledge and information, methods of research, how information is collected and analysed; *examine* the differences between quantitative and qualitative data, facts and opinions, assessing their relative merits.
Use of the above to	*Assess* the validity and reliability of data and information; *integrate* and

examine questions, form values, make judgements and draw conclusions	evaluate arguments; make informed judgements, appreciating the nature of objectivity and subjectivity; recognise bias; distinguish between deductive and inductive reasoning, and arguments based on cause, authority and analogy; recognise fallacy and unsound arguments; draw *justified* conclusions.
Understanding of different kinds of knowledge, appreciating their strengths and limitations	Appreciation of the different characteristics of the arts, social sciences and sciences and the kinds of understanding gained from these; methods and processes of study of different disciplines. *Show* understanding of how values can influence judgements and that one mode of analysis or branch of knowledge may provide an incomplete picture.
Use of language to impart knowledge and understanding and present opinions and argument	Selecting and using a form and style of writing appropriate to purpose and *complex* subject matter; organising relevant information clearly and coherently, using specialist vocabulary when appropriate; ensuring text is legible and spelling, grammar and punctuation are accurate, so that meaning is clear.

NB Statements in italics indicate extensions for A2 beyond AS.

Culture and Society

An understanding and appreciation of the changing nature and importance of culture	Cultural values and the similarities and differences between people and cultures; nature and use of language; ways in which different uses and forms of language can affect meaning; literary and linguistic devices.
Creativity and Innovation	The human creative impulse and its processes; the role of art and design in society, the structure of art forms and genres and how their *meanings are communicated;* benefits of participation in the arts; the place and value of the arts in education. The role of artists; their contribution to society and interaction with their audiences; the role and responsibility of musicians, writers, film makers, television producers, artists and those involved in creative arts; issues of taste, judgement, morality and the law in the evaluation of art and protection of the public. Examples of art works and practitioners of artistic movements; *the* development and impact of artistic styles and movements; major examples of artistic achievement from a range of cultures and times, including modern and contemporary movements.
Aesthetic evaluation	Personal response to the arts and appreciation of a variety of forms using appropriate critical language; differences between subjective and objective evaluation of works and performances across a range of art forms. Objective criteria for such judgements.
Beliefs, values and moral reasoning	The role and importance of religious and value systems; features and tenets of major world religions.
Religious belief and experience and connections between them	Differences of opinion about beliefs and values; tolerance; *the* dilemmas and complexity of a multi-faith and pluralist society; tolerance; the process and problems of changing and developing *morality*; the place of religious and moral education. Viewpoints on moral issues; bases for moral and value judgements; religious and secular sides of moral arguments; *philosophical, moral* and ethical problems faced by society and individuals.
Examination and appreciation of ideologies and values in society	Factors which affect the interaction of individuals with society as a whole: freedoms and restrictions; rights and responsibilities; equality of opportunity, the law and judiciary, the relationship between civil law and religious belief.
Media and Communication	Processes and effects of the media and communication industries; similarities and differences between various media and between popular culture and 'high' art in entertainment; control and censorship; how information is presented and the power of language and images to transmit, persuade or distort; 'spin' and propaganda; the creation of wealth and exercise of power in the media and c*ommunication industries.* Effects and use of the internet and information technology.
Political processes and goals	The British political system and philosophies; the nature, processes, problems and responsibilities of a democracy; Processes and powers of government in Britain and other countries (from local policies *through to the EU)*: the monarchy; electoral procedures; main policies of the major UK political parties; citizenship *and rights and* responsibilities of the individual within a political context.
Relationship between	Aspects of social interaction at personal, local, national and *international*

law, society and ethics	*levels*; values and ethical issues in such areas as politics, society and business; crime and punishment. *International relations;* standards in public life.

Science and Society

Characteristics of the sciences (physical, life and earth)	An outline of the nature of, and ideas on, the origins of the universe, space and matter; natural forces and sources and forms of energy; the origin, extraction, processing, storage and distribution of the earth's resources. The concept of life. Science and religion in society.
Explanation and evaluation of human behaviour	Characteristics of human and social behaviour and approaches to social studies and policy; the changing role of the family; class, gender, race, age and disability. Approach of different disciplines in social science to how we understand and evaluate people and problems.
Social and economic trends and constraints	Economic issues on a national *and international* scale; the workings of business, commerce and industry; impact of political and economic issues on science, society and the environment; aspects of employment and unemployment; education; poverty. Different stages of social, industrial and scientific development in other countries. Nature, effects of, and approaches to, solving world problems and trouble spots; co-operation and intervention; international agencies.
Understanding of scientific methods, principles, criteria and their application	The nature of hypothesis and theory in scientific development. The nature of scientific investigation; design and use of scientific investigations; design, manufacture and experience of equipment and technology in contemporary society and *explanation* of underlying scientific principles.
The nature of scientific objectivity and the question of progress	*The nature and reliability of* research methodology in science and the extent to which scientists can be impartial in their methods and contribution to scientific research and development. Background to scientific discoveries and emergence and use of scientific ideas. Recent developments in information and communications technology, transport systems, sport and leisure.
The nature of objectivity in social sciences	The nature and reliability of research methodology in social science and the extent to which social scientists can be impartial in their methods and contribution to society and social policy.
Mathematical reasoning and its application	Commenting on data and representations of data; interpreting results and drawing conclusions. Assessing their implications.
The social, ethical and environmental implications of scientific discoveries and technological development	*Evaluating* the impact and implications of new inventions, developments and techniques, and decisions to put them into practice. The influence of scientific applications on the quality of life. Developments in genetics and biotechnology, agriculture, food production and conservation; health, fitness and balanced diets; hygiene, disease and everyday medical matters; *birth control*; the use and abuse of drugs, including alcohol and tobacco.
Moral responsibility of Scientists	Moral dilemmas associated with the work of scientists, technologists and industrialists; the application of moral dilemmas in a social and economic context. Professional codes of behaviour.
Past and present relationships between technology, science and society	The contributions of science and technology to human progress and *lifestyles in different societies*; effects of industry on ecological systems; consumption of the earth's resources; pollution and methods of waste disposal; the protection and conservation of the environment; *genetic engineering* and medical advances.

3A.7 Assessment – procedures, methods and levels

Unit 1 (GENA1)

AS Culture and Society

Section A

Material for comprehension, analysis and evaluation in objective test format, assessing candidates' ability to identify themes and arguments; to recognise and

distinguish between explicit and implicit statements, inferences, assumptions and conclusions; perceptions of the nature and use of language, style, references, illustration and justification; grasp of interrelationships of ideas, organisational structure, overall meaning and validity of argument.

Section B

Three structured questions requiring written responses based on a collection of short extracts, assessing candidates' abilities to summarise and comment on ideas, arguments and issues, using their own words and presenting their own opinions and judgements.

1 hour 30 minutes external examination

65 marks (50% of AS, 25% of A Level)

Available in January and June

Unit 2 (GENA2)

AS Science and Society

Section A

Material for comprehension, analysis, evaluation and mathematical reasoning in objective test format, assessing candidates' ability to understand scientific principles and information; interpret and apply statistical information and graphs; grasp ideas; consider validity of argument and implications for society.

Section B

Candidates answer **one** of three optional questions requiring written responses. Each question will have its own source will be divided into two parts, assessing candidates' abilities to analyse and evaluate sources and use own knowledge to present arguments about scientific and social issues.

1 hour 30 minutes external examination

65 marks (50% of AS, 25% of A Level)

Available in January and June

Unit 3 (GENA3)

A2 Culture and Society

Section A

Two compulsory structured writing questions requiring written responses, assessing candidates' ability to evaluate the strengths and weaknesses of at least one source and

provide a personal opinion on the topic concerned.

Section B

Candidates answer **one** of four optional essay questions taken from the main cultural themes in the unit content, assessing their abilities to analyse the question; conduct arguments and justify opinions with appropriate knowledge and illustrations; synthesise and communicate ideas; make overall judgements and draw valid conclusions.

Section C
Candidates answer **one** of four optional essay questions taken from the main social themes in the unit content, assessing their abilities to analyse the question; conduct arguments and justify opinions with appropriate knowledge and illustrations; synthesise and communicate ideas; make overall judgements and draw valid conclusions.
2 hours external examination
70 marks (25% of A Level)
Available in January and June

Unit 4 (GENA4)
A2 Science and Society
Section A
Short answer questions assessing a Case Study on a major national or global issue. The source material will be part pre-released (approximately five extracts) and part contained in the examination paper (approximately one extract). It will involve wide-ranging stimulus material including data and statistics.
The pre-release material will be available from 1 November for January examinations and 1 April for June examinations. Teachers **will** be allowed to discuss the pre-release material with their candidates.
This section will assess candidates' ability to show understanding of the detail of the material and to summarise the points and arguments contained within the extracts; to recognise the connections between the different elements of the subject concerned; and to exercise their own judgements on the nature of the problems presented. Questions related to the statistical data within the material will assess candidates' ability to handle statistics and appreciate their use in the context of a broader issue.
Section B
Candidates answer **one** of four optional science and society essay questions, assessing their abilities to analyse the question; conduct arguments and justify opinions with
appropriate knowledge and illustrations; synthesise and communicate ideas; make overall judgements and draw valid conclusions.
2 hours external examination
70 marks (25% of A Level)
Available in January and June

Assessment Objectives (AOs)
The Assessment Objectives are common to AS and A Level. The assessment units will assess the following Assessment Objectives in the context of the content and skills set out in the Subject Content.

Table 12: AQA GCE General Studies A Level Assessment Objectives

AO1	Demonstrate relevant knowledge and understanding applied to a range of issues, using skills from different disciplines
AO2	Marshal evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions
AO3	Demonstrate understanding of different types of knowledge, appreciating their strengths and limitations
AO4	Communicate clearly and accurately in a concise, logical and relevant way

Quality of Written Communication (AO4)

In GCE specifications which require candidates to produce written material in English, candidates must:

- ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear
- select and use a form and style of writing appropriate to purpose and to complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

Table 13: AQA GCE General Studies A Level weighting of Assessment Objectives

Assessment Objectives	Unit Weightings (%)				Overall % weight of AOs
	Unit 1	Unit 2	Unit 3	Unit 4	
AO1 (K&U)	8	9	7	7	30
AO2 (A&E)	10	9	8	9	36
AO3 (NofK)	3	3	5	5	17
AO4 (Comm)	4	4	5	4	18
Overall % wght of units	25	25	25	25	100

3A.8 Grading

The full A Level qualification will be graded on a six-point scale: A*, A, B, C, D and E. To be awarded an A* candidates will need to achieve a grade A on the full A Level qualification and an A* on the aggregate of the A2 units.

Candidates who fail to reach the minimum standard for grade E will be recorded as U (unclassified) and will not receive a qualification certificate. Individual assessment unit results will be certificated.

Re-sits and Shelf-life of Unit Results

Unit results remain available to count towards certification, whether or not they have already been used, as long as the specification is still valid. Candidates may re-sit a unit any number of times within the shelf-life of the specification. The best result for each unit will count towards the final qualification. Candidates who wish to repeat a qualification may do so by re-taking one or more units. The appropriate subject award entry, as well as the unit entry/entries, must be submitted in order to be awarded a new subject grade.

3A.9 QA Systems and code of practice

This specification complies with the following QCA rules and regulations:

- The Subject Criteria for General Studies
- The GCE AS and A Level Qualification Criteria
- The code of practice for GCE
- The Arrangements for the Statutory Regulation of External Qualifications in England, Wales and Northern Ireland: Common Criteria

In respect of examiner recruitment, question setting, examiner standardising and grade review. Very detailed and standard procedures exist for all of these functions and it is not felt necessary to include them here. Full AQA documentation can be supplied if required.

In addition it should be added that very comprehensive arrangements also exist for the preparation, pre-testing and acceptance of multiple choice items before the above question paper approval process comes into operation.

3B AQA EXTENDED PROJECT QUALIFICATION

3B.1 Aims and purpose of the qualification

It aims to allow candidates to:

- Have a significant input into the choice and design of an extended project and take responsibility for an individual task or for a defined task within a group project
- Develop and improve their own learning and performance as critical and reflective and independent learners
- Develop and apply decision making and problem solving skills
- Extend their planning, research , critical thinking, analysis, synthesis evaluation and presentation skills
- Develop where possible as confident learners and apply new technologies to their studies
- Develop and apply skills creatively, above all demonstrating initiative and enterprise
- Use their learning experiences to support their personal aspirations for higher education and career development

Broad Objectives

Upon achieving this qualification candidates' should be able to:

- Manage, by identifying, designing planning and completing the project or task within a group; learn organisational skills and strategies to meet their individual objectives.
- Learn how to use resources and research independently. Select information from a variety of resources, analyse data, apply it relevantly and demonstrate clear understanding of any appropriate linkages, connections and complexities of their topic
- Develop and realise their project, selecting and using a range of skills, including any new technologies, to solve problems and to take decisions critically, creatively and flexibly to attain their planned outcomes.
- Review. To evaluate outcomes including own learning and performance. Select and use a range of communication skills and media to convey and present evidenced outcomes and conclusions.

3B.2 History of the qualification

It started as a Pilot Scheme in November 2006.The pilot stage is now completed and the qualification will be available nationally, either as an integral part of the Diploma or as a 'stand alone' qualification from September 2008.

3B.3 Entry requirements for the qualification

None

3B.4 Age of candidates

None specified. The vast majority of those doing the Pilot were 17/18 year olds in Yrs 12/13 with a few mature students in FE Colleges.

3B.5 Guided Learning Hours

Delivery of the Extended Project Qualification in centres will involve some teaching of the relevant skills plus mentoring and supervision of the learner's progress. It will also involve extended independent work by the learner and will require in total 120 guided learning hours.

3B.6 Content and structure of the qualification

There is no formal syllabus for this qualification. Candidates choose a topic for themselves, keep a detailed production log which is monitored by a supervisor, produce a project in a variety of possible formats and also do a public presentation as part of the process which involves a question-and-answer session.

3B.7 Assessment – procedures, methods and levels

All components are internally assessed according to specific criteria and then externally moderated. There is no formal examination. The three components have to be produced by a time specified by the centre and then will be made available for external moderation. At present external moderation has been taking place in November, March and June. In future it will be in January and June.

Level Description

The following award descriptions indicate the level of attainment characteristic of the given grade at Level 3. They give a general indication of the required learning outcomes at each specific grade. The descriptions should be interpreted in relation to the content outlined in the specification; they are not designed to define that content.

The award will depend in practice upon the extent to which the candidate has met the Assessment Objectives (see Section 2.4.3) overall. Shortcomings in some aspects of the project may be balanced by a better performance in other aspects.

Grade A

Candidates clearly plan and execute highly organised and independent extended projects. There is clear evidence of how the advice given by the supervisor has been used or interpreted. The candidates use a wide range of resources critically and to good effect and show a clear link between the sources and the themes of their projects. Problems and issues are identified and fully explored, with conclusions drawn and the intended outcomes of the projects are fully realised. The conclusions are clearly presented and well argued leaving no doubt in the audiences' minds of the success of the venture. In their evaluations, candidates show a high level of insight into how they conducted their projects.

Grade C

The plan is sufficient to enable the candidates to achieve the overall objectives but limited in terms of being able to demonstrate the higher level organisational skills. There is some evidence of how the advice given by the supervisor has been used or interpreted. A range of resources is used but the candidates do not fully exploit the material. The candidates have met the goal of producing a project but have missed opportunities to develop the material more fully. The projects are clearly expressed and the conclusions are well argued in the presentation. In their evaluations, candidates reflect effectively on their strengths and weaknesses in carrying out their projects.

Grade E

Candidates produce a workable plan, however there is little evidence of how they have used or interpreted the advice given by the supervisor. The candidates use a

limited range of resources to enable the projects to be realised but there is no clear link between the resources and the themes of the projects. Appropriate use is made of resources but they are not greatly developed in the final projects. The final projects are adequate to communicate the intentions of the candidates but there is limited reflection on the way the final outcomes have emerged and their own strengths and weaknesses in carrying out their projects. Conclusions tend to be asserted rather than argued in the presentation.

3B.8 Grading

The Extended Project Qualification is graded on a six grade scale: A*, A, B, C, D, E. Candidates who fail to reach the minimum standard for grade E will be recorded as U (unclassified) and will not receive a qualification certificate.

3B.9 QA Systems and code of practice

Examiner recruitment

QCA guidelines followed

Standardised examining

As per QCA Code of Conduct for all internally assessed and externally moderated work.

Grade review

Standard QCA Guidelines followed.

3C EDEXCEL GCE BIOLOGY A LEVEL

3C.1 Aims and purpose of the qualification

It aims to allow candidates to:

- Gain knowledge and understanding of different areas of biology and of how they relate together
- Appreciate the importance of biology and biology-related issues to society and of how biology contributes to the success of the economy and of society.
- A deeper appreciation of the skills, knowledge and understanding of *How Science Works*
- and to make informed choices of future career

Broad Objectives

Upon achieving this qualification candidates' should be able to:

- Embark on further study in biology
- Understand the extent of their interest, enthusiasm and potential for biology in order to make informed choices with respect to further study and future career.

- Make informed decisions about life-style and health, and ethical, environmental and social issues.
- Demonstrate their level of achievement and potential when applying for HE courses and for employment opportunities

3C.2 History of the qualification

The new specification which centres will start to teach in September 2008 has originated from the fusion of two specifications, the Edexcel traditional A Level and Salters-Nuffield Advanced Biology.

The existing Edexcel traditional specification (pre 2008) developed from that of the London Examination Board prior to 1996 when London Examinations and BTEC were amalgamated to form Edexcel. In the early 1990s the London Examination Board Biology specification was revised in an innovative way which to some extent pre-empted modularity and revision of the A Level Common Core which took place in the mid nineties.

Salters-Nuffield Advanced Biology (SNAB) was developed by means of a major project involving the Nuffield Foundation and the Curriculum Centre based at the University of York intended to radically re-think Biology A Level with substantial outside funding and a steering committee which included leading figures from academic biology and from biological education directed by the Rev. Professor Michael Reiss. The specification was constructed around topics (or 'stories') which provided contexts in which to introduce biological knowledge and understanding. It was more than just a specification: part of its philosophy emphasized active student-centred learning and this was supported by a mass of innovative resources many of which were web-based. Initially Edexcel was not involved in the development of SNAB: it came on board when the project was already advanced as the assessment provider in partnership with the SNAB organization. Until the 2008 changes SNAB had its own examination series incorporating a number of innovative features consistent with the SNAB philosophy. These included an emphasis on context-based questions, ethical thinking, a practical review paper (testing skills learnt through activity based learning), the visit/issue report, A2 coursework in the form of a personal study based on a practical project and a synoptic paper using a pre-released scientific article, extended data question in an unfamiliar context and a distinctive approach to a synoptic essay.

A feature of SNAB was to make room for skills based learning by reducing the amount of factual content whilst dealing with what remained in both breadth and depth. This explains why the SNAB specification has what seem to be some surprising omissions (such as, for example, the kidney) whilst other topics are in as much, if not more, in-depth than is the case in traditional specifications.

The new specification

The new specification which replaces both the Edexcel traditional and SNAB and was based predominantly on the SNAB specification which became the 'context-led approach'. The differences in content largely arose from changes in QCA requirements. The innovative SNAB support material can still be used with the new specification. The SNAB specification was also re-arranged to produce the 'concept-led' approach which is designed to be taught in a more traditional way. The two separate routes are assessed by a single examination intended to be equally accessible to both. Some of the SNAB assessment features remain, including an emphasis on context questions, the visit/issue report and the A2 coursework project. Some which have been lost, such as the practical review paper and synoptic paper, have been lost mainly due to changes in QCA requirements in which A03 becomes How Science Works rather than synopticity and because a requirement to reduce the number of papers.

3C.3 Entry requirements for the qualification

The specification does not lay down formal minimum entry requirements but it is assumed that candidates have succeeded in GCSE science. The current SNAB specification states 'it is expected that that most students will have achieved at least a grade CC in GCSE Science (Double Award) or Applied Science (Double Award).

The examination series and the support material both require a good level of literacy. In particular the question based on pre-released article assumes a mature command of English. It could also be said that the whole course encourages students to develop literacy skills.

3C.4 Age of candidates

There are no formal age restrictions but this level 3 academic course is clearly aimed at the 16-18 age group, including the Pre-University cohort

3C.5 Guided Learning Hours

AS GCE Biology requires **180** guided learning hours in total.
Advanced GCE Biology requires **360** guided learning hours in total.

3C.6 Content and structure of the qualification

The course can be taught either by a context-led route (similar to existing SNAB in style) or a concept-led route (similar to existing traditional Edexcel) but both routes contain the same content and the same unit structure.

The syllabus content for this unit is outlined below:

Table 14: Edexcel GCE Biology A Level unit content

Lifestyle, health and risk	Chemicals of life, nutrition, heart and circulation, risk factors of cardiovascular disease.
Genes and health	Membranes, gas exchange surfaces, enzymes. Nucleic acids, genetic code and control of protein synthesis, mutations and genetic abnormalities, gene therapy and genetic screening.
The voice of the genome	Eukaryotic versus prokaryotic cell ultrastructure, the role of endoplasmic reticulum and golgi body protein transport including enzyme secretion, chromosomes and mitosis, gametes, fertilization, stem cells, gene expression, environment and genetic factors.
Biodiversity and Natural resources	Ultrastructure of plant cell, polycassharides, plant fibres and xylem, minerals in plants, drug testing, biodiversity and endemism, adaptation and evolution, taxonomy, zoos and seed banks and critical evaluation of their role in conservation.
On the wild side	Chloroplasts and photosynthesis, productivity and trophic levels, biotic and abiotic factors, distribution of species, field work, niche and succession, global warming and climate change, evolution and speciation.
Infection, immunity and forensics	Protein synthesis, DNA profiling, PCA and gel electrophoresis, microbes, microbes, decomposition and recycling, microbes as pathogens , the immune response, antibiotics and control of infection, and forensic biology.
Run for your life	Muscle physiology, respiration, biochemistry and ATP, heart and cardiovascular response to exercise, homeostasis, wear and tear of joints, medical technology and joints, ethics of the use of performance enhancing drugs.
Grey matters	Neurones, synapses and nervous impulses, co-ordination in plants and animals, functioning of parts of the human brain, brain development, nurture, nature and learning, use of animals in medical research, the biology of brain disorders, effects of drugs and hormones on synaptic function, production of drugs through GMOs.

How Science Works and synopticity permeate the course. There are also core practicals specified throughout the specification. Questions may be set on any of the written papers which assume that candidates have carried these out. The visit/issue report, the A2 coursework project and the pre-released article al require the development of a range of intellectual skills throughout the course.

3C.7 Assessment – procedures, methods and levels

There are six units, 3 at AS and 3 at A2.

AS

- Unit 1: topics 1 and 2
- Unit 2: topics 3 and 4
- Unit 3: practical assessment of skills by teacher (not moderated)
- Visit/issue report (internally marked and externally moderated according to the specification – might become externally marked)

A2

- Unit 4: topics 5 and 6
- Unit 5: topics 7 and 8 including section on the pre-released scientific article.
- Unit 6: Coursework – personal study (project)

The format of the examination is as follows:

Some multiple choice, some short and others long answer. Many context-based questions, some recall, questions testing experience of core practicals including How

Science Works. Some questions require extended prose but there are no essay questions.

Exam Dates

Students may take some unit modules in January (1 and 4), can qualify for AS with all three units available in June and all three A2 units in June at the end of the two year course. It is possible to take all 6 units at the end of the two years.

Level Description

The level descriptors are those laid down by QCA and common to all A Level Biology specifications:

Table 15: Edexcel GCE Biology AS Performance Descriptors

	Assessment objective 1	Assessment objective 2	Assessment objective 3
Assessment objectives	**Knowledge and understanding of science and of How science works** Candidates should be able to: ■ recognise, recall and show understanding of scientific knowledge ■ select, organise and communicate relevant information in a variety of forms.	**Application of knowledge and understanding of science and of How science works** Candidates should be able to: ■ analyse and evaluate scientific knowledge and processes ■ apply scientific knowledge and processes to unfamiliar situations including those related to issues ■ assess the validity, reliability and credibility of scientific information.	**How science works** Candidates should be able to: ■ demonstrate and describe ethical, safe and skilful practical techniques and processes, selecting appropriate qualitative and quantitative methods ■ make, record and communicate reliable and valid observations and measurements with appropriate precision and accuracy ■ analyse, interpret, explain and evaluate the methodology, results and impact of their own and others' experimental and investigative activities in a variety of ways.
A/B boundary performance descriptions	Candidates characteristically: a demonstrate knowledge and understanding of most principles, concepts and facts from the AS specification b select relevant information from the AS specification c organise and present information clearly in appropriate forms using scientific terminology.	Candidates characteristically: a apply principles and concepts in familiar and new contexts involving only a few steps in the argument b describe significant trends and patterns shown by data presented in tabular or graphical form; interpret phenomena with few errors; and present arguments and evaluations clearly c comment critically on statements, conclusions or data d carry out accurately most of the calculations specified for AS e translate successfully data that is presented as prose, diagrams, drawings, tables or graphs from one form to another.	Candidates characteristically: a devise and plan experimental and investigative activities, selecting appropriate techniques b demonstrate safe and skilful practical techniques and comment effectively on ethical issues c make observations and measurements with appropriate precision and record them methodically d interpret, explain, evaluate and communicate the results of their own and others' experimental and investigative activities, in appropriate contexts.
E/U boundary performance descriptions	Candidates characteristically: a demonstrate knowledge and understanding of some principles and facts from the AS specification b select some relevant information from the AS specification c present information using basic terminology from the AS specification.	Candidates characteristically: a apply a given principle to material presented in familiar or closely related contexts involving only a few steps in the argument b describe some trends or patterns shown by data presented in tabular or graphical form c identify, when directed, inconsistencies in conclusions or data d carry out some steps within calculations e translate data successfully from one form to another, in some contexts.	Candidates characteristically: a devise and plan some aspects of experimental and investigative activities b demonstrate safe practical techniques and comment on ethical issues c make observations and measurements and record them d interpret, explain and communicate some aspects of the results of their own and others' experimental and investigative activities, in appropriate contexts.

Table 16: Edexcel GCE Biology A2 Performance Descriptors

	Assessment objective 1	Assessment objective 2	Assessment objective 3
Assessment objectives	**Knowledge and understanding of science and of How science works** Candidates should be able to: ■ recognise, recall and show understanding of scientific knowledge ■ select, organise and communicate relevant information in a variety of forms.	**Application of knowledge and understanding of science and of How science works** Candidates should be able to: ■ analyse and evaluate scientific knowledge and processes ■ apply scientific knowledge and processes to unfamiliar situations including those related to issues ■ assess the validity, reliability and credibility of scientific information.	**How science works** Candidates should be able to: ■ demonstrate and describe ethical, safe and skilful practical techniques and processes, selecting appropriate qualitative and quantitative methods ■ make, record and communicate reliable and valid observations and measurements with appropriate precision and accuracy ■ analyse, interpret, explain and evaluate the methodology, results and impact of their own and others' experimental and investigative activities in a variety of ways.
A/B boundary performance descriptions	Candidates characteristically: a demonstrate detailed knowledge and understanding of most principles, concepts and facts from the A2 specification b select relevant information from the A2 specification c organise and present information clearly in appropriate forms using scientific terminology.	Candidates characteristically: a apply principles and concepts in familiar and new contexts involving several steps in the argument b describe significant trends and patterns shown by complex data presented in tabular or graphical form; interpret phenomena with few errors; and present arguments and evaluations clearly c evaluate critically any statements, conclusions or data d carry out accurately most of the calculations specified for A2; and apply the principles of statistical analysis when directed e translate successfully data that is presented as prose, diagrams, drawings, tables or graphs from one form to another f select a wide range of facts, principles and concepts from both AS and A2 specifications g link together appropriate facts principles and concepts from different areas of the specification.	Candidates characteristically: a devise and plan experimental and investigative activities, selecting appropriate techniques b demonstrate safe and skilful practical techniques and comment effectively on ethical issues c make observations and measurements with appropriate precision and record these methodically d interpret, explain, evaluate and communicate the results of their own and others' experimental and investigative activities, in appropriate contexts e use an appropriate statistical technique to assess the validity of a hypothesis.
E/U boundary performance descriptions	Candidates characteristically: a demonstrate knowledge and understanding of some principles, concepts and facts from the A2 specification b select some relevant information from the A2 specification c present information using basic terminology from the A2 specification.	Candidates characteristically: a apply given principles or concepts in familiar and new contexts involving a few steps in the argument b describe, and provide a limited explanation of, trends or patterns shown by complex data presented in tabular or graphical form c identify, when directed, inconsistencies in conclusions or data d carry out some steps within calculations e translate data successfully from one form to another, in some contexts f select some facts, principles and concepts from both AS and A2 specifications g put together some facts, principles and concepts from different areas of the specification.	Candidates characteristically: a devise and plan some aspects of experimental and investigative activities b demonstrate safe practical techniques and comment on ethical issues c make observations and measurements and record them d interpret, explain and communicate some of the results of their own and others' experimental and investigative activities, in appropriate contexts e use a given statistical technique.

3C.8 Grading

Grades are decided, following comparisons of current scripts with archive material on the basis of professional judgment of senior examiners and statistical data. This process is now largely done on-line.

3C.9 QA Systems and code of practice

Examiner recruitment

Through the Edexcel website. expert markers are experienced teachers familiar with Biology A Level. The relatively few graduate markers are all biology graduates and many are teachers who might become expert markers when vacancies arise.

Question setting

Each paper is the responsibility of a Principal Examiner who sets the paper. This is considered by reviewers who meet with the Chair of examiners, the Chief Examiner and the PE who set the paper for a PE for QPEC meeting. The modified paper is considered by scrutineers whose comments are considered by the Chair, CE and the PE who set the paper before it goes to press.

Standardised examining

In June 2008 SNAB biology will be standardized by a one day face-to-face meetings of PE and team leaders where the mark scheme standardization material will be discussed followed by a one day face-to-face meeting with PE and TLs with assistant examiners. The rest of the process is entirely on-line where standardization continues with monitoring of marking by TLs. Increasingly Edexcel standardizing is going on line although pre-standardisation by PE and TLs through face-to-face meetings are likely to continue.

Grade review

Done on-line

3D AQA GCE ECONOMICS A LEVEL

3D.1 Aims and purpose of the qualification

AS and A Level courses based on this specification should encourage candidates to:

- develop an interest in and enthusiasm for the study of the subject
- appreciate the contribution of economics to the understanding of the wider economic and social environment
- develop an understanding of a range of concepts and acquire an ability to use these concepts in a variety of different contexts
- use an enquiring, critical and thoughtful approach to the study of economics and develop an ability to think as an economist
- develop skills, qualities and attitudes which will equip them for the challenges, opportunities and responsibilities of adult and working life.

Broad Objectives

Upon achieving this qualification candidates' should be able to:

- Demonstrate knowledge and understanding of the specified content
- Apply knowledge and understanding of the specified content to problems and issues arising from both familiar and unfamiliar situations
- Analyse economic problems and issues
- Evaluate economic arguments and evidence.

In addition, candidates should:

- ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear
- select and use a form and style of writing appropriate to purpose and to complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate

3D.2 History of the qualification

AQA GCE Economics is a GCE A Level qualification. GCEs have been in existence since the 1950s and remain the most widely used and most well understood qualification in 16-19 education. Like almost all GCEs, new specifications for Economics are being introduced for candidates starting courses in September 2008.

3D.3 Entry requirements for the qualification

There are no prior learning requirements. It is not necessary for candidates to have studied GCSE Economics before commencing work on this specification and no prior knowledge of economics is necessary. Like all GCEs, there is an expectation that candidates will have a minimum of 5 GCSEs at Grade C and above including English Language and Mathematics.

3D.4 Age of candidates

The vast majority of candidates are aged 16-18.

3D.5 Guided Learning Hours

AS GCE Economics requires **180** guided learning hours in total.
Advanced GCE Economics requires **360** guided learning hours in total.

3D.6 Content and structure of the qualification

The syllabus content for this unit is outlined below.

Table 17: AQA GCE Economics A Level unit content

AS	
Microeconomics	Macroeconomics
the economic problem	the measurement of macroeconomic performance
the allocation of resources in competitive markets	how the macroeconomy works: ASD/AS analysis, the circular flow of income and related concepts
production and efficiency	economic performance
market failure	macroeconomic policy
government intervention in the market	
A2	
Microeconomics	Macroeconomics
the firms: objectives, costs and revenues	macroeconomic indicators
competitive markets	managing the national economy
concentrated markets	the international economy
the labour market	

government intervention in the market	

3D.7 Assessment – procedures, methods and levels

The format of the examination is as follows:

AS Examinations
Unit 1 – ECON1 Economics: Markets and Market Failure
50% of AS, 25% of A Level
1 hour 15 minutes examination
75 marks (100 UMS)
Section A: 25 compulsory objective test items (25 marks)
Section B: Two optional data response questions are set; candidates answer one. (50 marks)
Available January and June

Unit 2 – ECON2 Economics: The National Economy
50% of AS, 25% of A Level
1 hour 15 minutes examination
75 marks (100 UMS)
Section A: 25 compulsory objective test items (25 marks)
Section B: Two optional data response questions are set; candidates answer one. (50 marks)
Available January and June

A2 Examinations Unit 3 – ECON3
Economics: Business Economics and the Distribution of Income
25% of A Level
2 hour examination
80 marks (100 UMS)
Section A: Two optional data response questions are set; candidates answer one. (40 marks) One question will always relate to the global context and the other to the European Union context.
Section B: Three optional essay questions are set; candidates answer one. (40 marks)
Available January and June

Unit 4 – ECON4 Economics: The National and International Economy
25% of A Level
2 hour examination
80 marks (100 UMS)

Section A: Two optional data response questions are set; candidates answer one. (40 marks) One question will always relate to the global context and the other to the European Union context.
Section B: Three optional essay questions are set; candidates answer one. (40 marks)
Available January and June

Exam Dates

All units are available both in January and in June.

Level Description

These performance descriptions show the level of attainment characteristic of the grade boundaries at A Level. They give a general indication of the required learning outcomes at the A/B and E/U boundaries at AS and A2. The descriptions should be interpreted in relation to the content outlined in the specification; they are not designed to define that content. The grade awarded will depend in practice upon the extent to which the candidate has met the Assessment Objectives (see Section 4) overall. Shortcomings in some aspects of the examination may be balanced by better performances in others.

Table 18: AQA GCE Economics AS Performance Descriptions

	Assessment Objective 1	Assessment Objective 2	Assessment Objective 3	Assessment Objective 4
Assessment Objectives	Demonstrate knowledge and understanding of the specified content.	Apply knowledge and understanding of the specified content to problems and issues arising from both familiar and unfamiliar situations.	Analyse economic problems and issues.	Evaluate economic arguments and evidence, making informed judgements.
A/B boundary performance descriptions	Candidates characteristically: a) demonstrate detailed knowledge of a range of facts and concepts included in the AS specification b) demonstrate clear understanding of: • terminology • institutions • models.	Candidates characteristically: a) apply: • concepts • numerical and graphical techniques • theories and models • terminology to issues arising in familiar and unfamiliar situations.	Candidates characteristically: a) select relevant concepts, models, theories and techniques b) demonstrate, for the most part, development of logical explanations of economic problems and issues with focus and relevance.	Candidates characteristically: a) evaluate straightforward economic arguments and evidence by: • prioritising evidence and arguments • making judgements • reaching and presenting conclusions.
E/U boundary performance descriptions	Candidates characteristically: a) demonstrate knowledge of some facts and concepts included in the AS specification b) demonstrate some understanding of: • terminology • institutions • models.	Candidates characteristically: a) apply in part some of the following: • concepts • numerical and graphical techniques • theories and models • terminology to issues arising in familiar situations.	Candidates characteristically: a) demonstrate some evidence of selecting relevant concepts, models, theories and techniques b) demonstrate partial explanations of economic problems and issues.	Candidates characteristically: a) evaluate straightforward economic arguments and evidence at a simple level, for example by: • offering judgements • stating conclusions.

Table 19: AQA GCE Economics A2 Performance Descriptions

	Assessment Objective 1	Assessment Objective 2	Assessment Objective 3	Assessment Objective 4
Assessment Objectives	Demonstrate knowledge and understanding of the specified content.	Apply knowledge and understanding of the specified content to problems and issues arising from both familiar and unfamiliar situations.	Analyse economic problems and issues.	Evaluate economic arguments and evidence, making informed judgements.
A/B boundary performance descriptions	Candidates characteristically: demonstrate, across the AS and A2 specifications: a) detailed knowledge of a range of facts and concepts b) clear understanding of: • terminology • institutions • models c) detailed knowledge and clear understanding of the interconnections between the different elements of the subject content.	Candidates characteristically: a) apply clearly and effectively: • concepts • numerical and graphical techniques • theories and models • terminology to complex issues arising in familiar and unfamiliar situations.	Candidates characteristically: a) select relevant concepts, models, theories and techniques b) demonstrate, for the most part, development of logical explanations for complex economic problems and issues, with focus and relevance.	Candidates characteristically: a) evaluate effectively complex economic arguments: • prioritise evidence and arguments • make reasoned judgements • reach and present supported conclusions • make reasoned recommendations.
E/U boundary performance descriptions	Candidates characteristically: demonstrate, across the AS and A2 specifications: a) knowledge of some facts and concepts b) some understanding of: • terminology • institutions • models c) some knowledge and understanding of the interconnections between the different elements of the subject content.	Candidates characteristically: a) apply appropriately some: • concepts • numerical and graphical techniques • theories and models • terminology to complex issues arising in a range of situations, some of which may be unfamiliar.	Candidates characteristically: a) demonstrate some evidence of selecting relevant concepts, models, theories and techniques b) demonstrate partial development of logical explanations for complex economic problems and issues.	Candidates characteristically: a) demonstrate some evaluative skills in relation to complex economic arguments and evidence: • make judgements • reach and present conclusions with some supporting evidence • make recommendations.

3D.8 Grading

The AS qualification will be graded on a five-point scale: A, B, C, D and E. The full A Level qualification will be graded on a six-point scale: A*, A, B, C, D and E. To be awarded an A*, candidates will need to achieve a grade A on the full A Level qualification and an A* on the aggregate of the A2 units.

For AS and A Level, candidates who fail to reach the minimum standard for grade E will be recorded as U (unclassified) and will not receive a qualification certificate. Individual assessment unit results will be certificated.

3D.9 QA Systems and code of practice

GCE Economics is covered by a standard QCA code of practice. All procedures conform to the 'QCA code of practice for GCSE, GCE and AEA'.

Examiner recruitment

Examiners are recruited almost exclusively from practicing or former teachers of GCE Economics.

Question setting

A setter (who is almost always the Chief or Principal Examiner) prepares the first drafts of question papers (QPs). The first drafts are then considered by the Reviser, who is an experienced examiner. The Reviser's comments are incorporated by the Setter before the papers are subjected to a formal scrutiny process at a meeting of

the Question Paper Evaluation Committee (QPEC). The final draft of the QP is produced after the QPEC meeting and typeset. After checking and proof-reading by the AQA subject officer and the setter, the QP is sent for further scrutiny by the Scrutineer, who has not previously seen the QP. The QP is then sent by the subject officer for a final check to the Principal Examiner, the Chief Examiner and the Chair of Examiners.

Multiple choice papers follow a slightly different pattern. Items are written by item writers who are experienced examiners and/or teachers. Following scrutiny by a panel of examiners, the items are accepted, amended or rejected. The subject officer together with the Principal Examiner responsible for the objective test papers, put papers together which are then pretested in existing AQA centres. The results are collated and the items are put to further scrutiny at another meeting of examiners. In the light of the pre-test results, items are accepted, amended or rejected. They are then typed and stored in an item bank. Question papers are constructed by selecting items from the bank so that the paper complies with the specification relating to topics and skills. After this the paper is submitted to a Question Paper Evaluation Committee (QPEC) for amendment. The paper is then sent to the scrutineer before being proof read by the subject officer, the principal examiner responsible for multiple choice tests, the Chief Examiner and the Chair of Examiners.

Standardised examining

Question papers are marked by panels of examiners headed by a Principal Examiner or the Chief Examiner.

The Principal or Chief Examiner initially selects a number of scripts to be presented at the standardisation meeting. He or she marks the scripts and presents them to a pre-standardisation meeting where team leaders and the Chair of Examiners are in attendance. The scripts are discussed, mark schemes modified and final marks agreed upon.

There then follows a standardization meeting attended by all examiners for the paper. Assistant examiners provisionally mark a sample of their allocation of scripts before attending the standardisation meeting. At the standardisation meeting, the examiners finalise the mark scheme, discuss its application to responses observed in provisional marking, and are trained in its interpretation and use. After the standardisation meeting, examiners begin marking.

The quality of their work is monitored at two stages during the marking period: immediately after the coordination meeting when they have to send a sample of 190 scripts to their team leader; and mid-way through the marking period when they have

to submit a sample of 50 scripts. Procedures exist for situations where examiners are inconsistent, consistent but inaccurate, or about whom there are lingering doubts.

Grade Review

There is a marking review process for candidates who fall on a particular borderline mark related to a grade.

3E OCR GCE MFL (FRENCH) A LEVEL

3E.1 Aims and purposes of the qualification

The qualification aims to allow candidates (within a variety of contexts, sources, registers, styles and purposes) to:

- develop an interest in language learning
- understand the target-language
- communicate effectively in the target-language
- understand the culture of communities where the target-language is spoken
- consider the study of the target-language in a broader context
-

Its objectives are that, upon achieving this qualification, candidates' should be able (within a variety of contexts, sources, registers, styles and purposes) to:

- listen and respond to the target-language
- read and respond to the target-language
- use spoken and written target-language appropriately and
- use spoken and written target-language accurately, in order to…
  - inform, explain, argue, discuss, analyse, evaluate and present points of view
  - transfer meaning to and from the target-language
  - understand and use the grammatical system of the target-language
  - study and understand aspects of the culture of one or more of the communities where the target-language is spoken

3E.2 History of the qualification

The qualification is OCR's Advanced GCE in the major languages, revised and published in 2007 in accordance with national requirements. As such it derives directly from Advanced GCE syllabuses offered up until the 1990s by UCLES, O&CEB and UODLE.

3E.3 Entry requirements for the qualification

The first two of the four units in this specification are AS units. Learners embarking on these are expected to have been successful at Higher Tier GCSE or equivalent.

3E.4 Age of candidates

Learners starting the Advanced GCE course are normally 16-17 years of age, and those certificating are normally 18-19.

3E.5 Guided Learning Hours

AS GCE French requires **180** guided learning hours in total.
Advanced GCE French requires **360** guided learning hours in total.

3E.6 Content and structure of the qualification

The qualification is a four unit A-Level, with Units 1 and 2 constituting AS Level and Units 3 and 4 being A2 units.

Unit 1: Speaking (French F701)
Unit 2: Listening, Reading and Writing 1 (French F702)
Unit 3: Speaking (French F703)
Unit 4: Listening, Reading and Writing 2 (French F704)

Spoken and written sources will include material that relates to the contemporary society, cultural background and heritage of one or more of the countries or communities where the language is spoken. The topic areas are:

Table 20: OCR GCE MFL (French) A Level unit structure

AS specification	A2 specification
Aspects of daily life The family Food, drink, health, obsessions and addictions Transport	Society Integration and exclusion Law and order Unemployment
Leisure and entertainment Sport Tourism and related themes Leisure activities	The environment The individual and the environment Energy management Pollution Conservation of the natural world
Communication and media	Science and technology: impact and issues Medical progress Scientific advances Technological developments

The grammatical content is that which has been agreed at a national level between the awarding bodies, professional teacher associations and QCA.

3E.7 Assessment – procedures, methods and levels

The qualification involves two units at AS and two at Advanced GCE. At each level one of the units is a Speaking Test, and the other a Written Paper.

Units may be taken in any order.

The format of the examination is as follows:

Unit 1 (AS) Speaking Test 15 mins. approximately
conducted by OCR or by the teacher, and marked by OCR

Unit 2 (AS) Written Paper 2h15m
testing the other three skills (Listening, Reading and Writing)
These two units are normally taken during the first year of a two-year course, and may be separately certificated as AS level.

Unit 3 (Advanced GCE) Speaking Test 15-20 mins.,
conducted by OCR or by the teacher, and marked by OCR

Unit 4 (Advanced GCE) Written Paper 2h30m,
testing the other three skills.
These two units are normally taken in the second year of the course. Together with the two AS units, they qualify for certification at Advanced GCE.

Exam Dates
Units are available twice a year, in January and June.
Candidates may re-sit any unit or units more than once before applying for certification.

Level Description
Standards of performance are those defined by the descriptors for AS and Advanced GCE agreed nationally between the awarding bodies and QCA

3E.8 Grading

All four units are awarded on a scale of "A" (the highest) to "E" (a bare pass). The thresholds for these grades are based on raw mark score boundaries agreed at a specially convened awarding meeting.

Certification at AS and Advanced GCE is an aggregation of those boundaries, awarded on a scale of "A" to "E". Certification thresholds are based on UMS (uniform mark scale) boundaries. The AS UMS scale has a maximum of 200 marks, the Advanced GCE, 400.

UMS marks are mapped across from raw mark aggregations and the UMS thresholds, which are unchanging, are stated in the specification.

In addition, at Advanced GCE, a grade of "A*" is awardable. To achieve this, a candidate must achieve grade A (a minimum of 320 UMS marks) at Advanced GCE (i.e. over all four units), and then achieve 180 out of the 200 UMS marks available in the two Advanced GCE units taken together.

3E.9 QA Systems and code of practice

The qualification is run in accordance with QCA's code of practice, which sets out detailed procedures, acceptances and requirements for every stage in the process.

Examiner recruitment

Papers are supervised by PEs (Principal Examiners), experienced exam personnel who are appointed after national advertisement.

Question setting

The PE sets a draft paper, including mark scheme, which is passed for comment in writing by at least two Revisers, one a native speaker of the target-language. The PE revises the draft in the light of these comments and a second draft is scrutinized in a QPEC (Question Paper Evaluation Committee), chaired by the CoE (Chair of Examiners). The PE then produces a final draft which is set up for printing and checked by an Assessor, the PE and the CoE.

Standardised examining

Once scripts are available from candidates who have taken the paper, a selection is reviewed by the PE and other senior markers. In the light of these, the mark scheme is amended finally, and then explained and practised with the remaining markers, in order to ensure a common application of the mark scheme amongst all.

Grade review

Where there may have been very erratic markers, or markers whose work seems to be of dubious quality, a Marking Review meeting may be called, at which the problem scripts are reviewed by the PE and senior markers, and correct marks awarded as necessary.

3F AQA GCE MATHEMATICS A LEVEL

3F.1 Aims and purpose of the qualification

This specification is designed to encourage candidates to study mathematics post-16. It enables a variety of teaching and learning styles, and provides opportunities for students to develop and be assessed in five of the six Key Skills.

It includes optional assessed coursework in a number of Statistics and Mechanics units, but coursework is not a compulsory feature and relatively few candidates choose this option.

The qualifications based on this specification are a recognised part of the National Qualifications Framework. As such, AS and A Level provide progression from Key

Stage 4, through post-16 studies and form the basis of entry to higher education or employment.

This GCE Mathematics specification complies with:

- the Common Criteria;
- the Subject Criteria for Mathematics;
- the GCSE, GCE, GNVQ and AEA code of practice, April 2008;
- the GCE Advanced Subsidiary and Advanced Level Qualification-Specific Criteria.

The aims set out below describe the educational purposes of following a course in Mathematics/Further Mathematics/Pure Mathematics and are consistent with the Subject Criteria. They apply to both AS and Advanced specifications. Most of these aims are reflected in the assessment objectives; others are not because they cannot be readily translated into measurable objectives.

The specification aims to encourage candidates to:

- develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment;
- develop abilities to reason logically and to recognise incorrect reasoning, to generalise and to construct mathematical proofs;
- extend their range of mathematical skills and techniques and use them in more difficult unstructured problems;
- develop an understanding of coherence and progression in mathematics and of how different areas of mathematics can be connected;
- recognise how a situation may be represented mathematically and understand the relationship between 'real world' problems and standard and other mathematical models and how these can be refined and improved;
- use mathematics as an effective means of communication;
- read and comprehend mathematical arguments and articles concerning applications of mathematics;
- acquire the skills needed to use technology such as calculators and computers effectively, to recognise when such use may be inappropriate and to be aware of limitations;
- develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general;
- take increasing responsibility for their own learning and the evaluation of their own mathematical development.

Table 21: AQA GCE Mathematics A Level Assessment Objectives

The assessment objectives are common to both AS and A Level. The schemes of assessment will assess candidates' ability to:	
AO1	recall, select and use their knowledge of mathematical facts, concepts and techniques in a variety of contexts
AO2	construct rigorous mathematical arguments and proofs through use of precise statements, logical deduction and inference and by the manipulation of mathematical expressions, including the construction of extended arguments for handling substantial problems presented in unstructured form
AO3	recall, select and use their knowledge of standard mathematical models to represent situations in the real world; recognise and understand given representations involving standard models; present and interpret results from such models in terms of the original situation, including discussion of the assumptions made and refinement of such models
AO4	comprehend translations of common realistic contexts into mathematics; use the results of calculations to make predictions, or comment on the context; and, where appropriate, read critically and comprehend longer mathematical arguments or examples of applications
AO5	use contemporary calculator technology and other permitted resources (such as formulae booklets or statistical tables) accurately and efficiently; understand when not to use such technology, and its limitations; give answers to appropriate accuracy.

The use of clear, precise and appropriate mathematical language is expected as an inherent part of the assessment of AO2.

Table 22: AQA GCE Mathematics A Level scoring and weighting

Assessment Objectives	MPC1	MPC2	Applied unit	MPC3	MPC4	Applied unit	Weighting of AOs (range %)
AO1	7–8	6–7	3–5	6–7	6–7	3–5	32–40
AO2	7–8	6–7	3–5	6–7	6–7	3–5	32–40
AO3	0	0	5–6	0	0	5–6	10–12
AO4	1–2	1–2	1–2	1–2	1–2	1–2	6–12
AO5	0	1–2	1½–2½	1–2	1–2	1½–2½	6–11

3F.2 History of the qualification

AQA offers one specification in GCE Mathematics, and a separate specification in GCE Statistics.

This specification is a development from the AQA GCE Mathematics Specification A (6300) and the AQA GCE Mathematics and Statistics Specification B (6320) which ran from 2000 and the NEAB Linear and Modular Mathematics GCE Specifications and the AEB Mathematics GCE Specifications and the School Mathematics Project (SMP) 16–19 syllabus which ran up to 2000.

3F.3 Entry requirements for the qualification

Mathematics is, inherently, a sequential subject. There is a progression of material through all levels at which the subject is studied. The Subject Criteria for Mathematics and therefore this specification build on the knowledge, understanding and skills established at GCSE Mathematics.

3F.4 Age of candidates

Candidates taking the A-Level are typically 18 years old when taking their final 3 of 6 exams.

3F.5 Guided Learning Hours

AS GCE Mathematics requires **180** guided learning hours in total.
Advanced GCE Mathematics requires **360** guided learning hours in total.

3F.6 Content and structure of the qualification

Mathematics GCE A Level is a six Unit award, with three units required for an AS subject award and six for a full A Level subject award. Four Units are compulsory (C1, C2, C3 and C4) and contain the QCA 'Pure' core. They develop this aspect of the subject more or less sequentially and hence each of the later modules will incidentally but purposively test concepts on earlier modules in the context of the content of the later module whilst primarily introducing new concepts and ideas.

The content of these four modules is outlined in Table 18.

Table 23: AQA GCE Mathematics A Level unit structure

AS Specification (Core Modules)	A2 Specification (Core Modules)
Pure Core 1 Algebra Coordinate Geometry Differentiation Integration	Pure Core 3 Algebra and Functions Trigonometry Exponentials and Logarithms Differentiation Integration Numerical Methods
Pure Core 2 Algebra and Functions Sequences and Series Trigonometry Exponentials and logarithms Differentiation Integration	Pure Core 4 Algebra and Functions Coordinate Geometry in the (*x, y)* plane Sequences and Series Trigonometry Exponentials and Logarithms Differentiation and Integration Vectors

The two remaining modules offer a choice of applications. Candidates can choose to study two different applications (Mechanics and Statistics, Mechanics and Decision, Statistics and Decision, Mechanics and further Mechanics to greater academic depth, Statistics and further Statistics to greater academic depth, Decision and further Decision to greater academic depth). The Mechanics and Statistics units are dependent on C1 and C2. The further Mechanics and further Statistics units are dependent on C1, C2, C3, C4.

3F.7 Assessment – procedures, methods and levels

All assessment units are weighted at 16.7% of an A Level (33.3% of an AS).

One Statistics and one Mechanics unit is available with coursework. Both of these units have an equivalent unit without coursework. The same teaching module is

assessed, whether the assessment unit with or without coursework is chosen. For example, Module Statistics 1 (Section 20) can be assessed by either unit MS1A or unit MS1B. For units with coursework, the coursework contributes 25% towards the marks for the unit, and the written paper 75% of the marks.

Pure Core, Further Pure and Decision Mathematics units do not have coursework.

The papers for units without coursework are 1 hour 30 minutes in duration and are worth 75 marks.
The papers for units with coursework are 1 hour 15 minutes in duration and are worth 60 marks.

The GCE Advanced Subsidiary and Advanced Level Qualification-specific Criteria state that A Level specifications must include synoptic assessment (representing at least 20% of the total A Level marks).

Synoptic assessment in mathematics addresses candidates' understanding of the connections between different elements of the subject. It involves the explicit drawing together of knowledge, understanding and skills learned in different parts of the A Level course, focusing on the use and application of methods developed at earlier stages of the course to the solution of problems. Making and understanding connections in this way is intrinsic to learning mathematics. This requirement is met in the structure of the Specification.

Exam Dates
January and June

Level Description
The following grade descriptors indicate the level of attainment characteristic of the given grade at AS and A Level. They give a general indication of the required learning outcomes at each specific grade. The descriptors should be interpreted in relation to the content outlined in the specification; they are not designed to define that content.

The grade awarded will depend, in practice, on the extent to which the candidate has met the Assessment Objectives (as in Section 6) overall. Shortcomings in some aspects of the examination may be balanced by better performances in others.

Grade A
Candidates recall or recognise almost all the mathematical facts, concepts and techniques that are needed, and select appropriate ones to use in a wide variety of contexts. Candidates manipulate mathematical expressions and use graphs,

sketches and diagrams, all with high accuracy and skill. They use mathematical language correctly and proceed logically and rigorously through extended arguments. When confronted with unstructured problems, they can often devise and implement an effective solution strategy. If errors are made in their calculations or logic, these are sometimes noticed and corrected.

Candidates recall or recognise almost all the standard models that are needed, and select appropriate ones to represent a wide variety of situations in the real world. They correctly refer results from calculations using the model to the original situation; they give sensible interpretations of their results in the context of the original realistic situation. They make intelligent comments on the modelling assumptions and possible refinements to the model.

Candidates comprehend or understand the meaning of almost all translations into mathematics of common realistic contexts. They correctly refer the results of calculations back to the given context and usually make sensible comments or predictions. They can distil the essential mathematical information from extended pieces of prose having mathematical content. They can comment meaningfully on the mathematical information.

Candidates make appropriate and efficient use of contemporary calculator technology and other permitted resources, and are aware of any limitations to their use. They present results to an appropriate degree of accuracy.

Grade C

Candidates recall or recognise most of the mathematical facts, concepts and techniques that are needed, and usually select appropriate ones to use in a variety of contexts. Candidates manipulate mathematical expressions and use graphs, sketches and diagrams, all with a reasonable level of accuracy and skill. They use mathematical language with some skill and sometimes proceed logically through extended arguments or proofs. When confronted with unstructured problems, they sometimes devise and implement an effective and efficient solution strategy. They occasionally notice and correct errors in their calculations.

Candidates recall or recognise most of the standard models that are needed and usually select appropriate ones to represent a variety of situations in the real world. They often correctly refer results from calculations using the model to the original situation, they sometimes give sensible interpretations of their results in the context of the original realistic situation. They sometimes make intelligent comments on the modelling assumptions and possible refinements to the model.

Candidates comprehend or understand the meaning of most translations into mathematics of common realistic contexts. They often correctly refer the results of calculations back to the given context and sometimes make sensible comments or predictions. They distil much of the essential mathematical information from extended pieces of prose having mathematical context. They give some useful comments on this mathematical information.

Candidates usually make appropriate and efficient use of contemporary calculator technology and other permitted resources, and are sometimes aware of any limitations to their use. They usually present results to an appropriate degree of accuracy.

Grade E

Candidates recall or recognise some of the mathematical facts, concepts and techniques that are needed, and sometimes select appropriate ones to use in some contexts. Candidates manipulate mathematical expressions and use graphs, sketches and diagrams, all with some accuracy and skill. They sometimes use mathematical language correctly and occasionally proceed logically through extended arguments or proofs. Candidates recall or recognise some of the standard models that are needed and sometimes select appropriate ones to represent a variety of situations in the real world. They sometimes correctly refer results from calculations using the model to the original situation; they try to interpret their results in the context of the original realistic situation.

Candidates sometimes comprehend or understand the meaning of translations in mathematics of common realistic contexts. They sometimes correctly refer the results of calculations back to the given context and attempt to give comments or predictions. They distil some of the essential mathematical information from extended pieces of prose having mathematical content. They attempt to comment on this mathematical information.

Candidates often make appropriate and efficient use of contemporary calculator technology and other permitted resources. They often present results to an appropriate degree of accuracy.

3F.8 Grading

The full A Level qualification will be graded on a six-point scale: A*, A, B, C, D and E. To be awarded an A* candidates will need to achieve a grade A on the full A Level qualification and an A* on the aggregate of the A2 units.

Candidates who fail to reach the minimum standard for grade E will be recorded as U (unclassified) and will not receive a qualification certificate. Individual assessment unit results will be certificated.

3F.9 QA Systems and code of practice

Examiner recruitment

All examiners are experienced expert teachers in Mathematics who mark a complete paper.

Each module exam is set to target marks of 30 for a grade E and 60 for a grade A (40% and 80% respectively of 75 marks). Skills and understanding required are matched to QCA guidelines. Each Principal Examiner sets an initial draft question paper to setting instructions which are designed to enable all bona fide candidates to demonstrate what they understand and to differentiate between them appropriately. An external Reviser will scrutinize this paper to ensure it satisfies the criteria and that no significant topic is omitted for three consecutive sessions and other topics are tested regularly. The Principal Examiner will then revise the paper and it will be distributed for comment by other Principal/Chief Examiners and the Chair and Assistant Chair of Examiners and two independent teachers of A Level who are members of AQA's Subject Committee. This QPEC committee then meets and comes to a consensus which essentially determines the question paper. After it is put into format by the printers the paper is sent to an external Scrutineer who works through the paper 'as a candidate'. The Scrutineer's comments are then considered by the Reviser, Principal, Chief and Chair of Examiners before finalizing the paper. The mark scheme for the paper forms part of this process.

After candidates have taken the paper a pre-standardisation meeting of the Principal Examiner and Team Leaders and Chief Examiner or Chair of Examiners reviews the mark scheme in the light of candidates' responses and previous mark schemes on the unit. On the following day all the examiners meet under the chairmanship of the Principal Examiner and go through the mark scheme line by line, highlighting any issues raised by other examiners until a final mark scheme is produced so that each examiner will mark in as near as possible exactly the same way. Examiners' marking is checked by Team Leaders or the Principal Examiner at least twice and appropriate action taken if necessary. The Chair and Assistant Chair of Examiners monitor the Chief Examiners' work and the Chief Examiners' monitor the work of Principal Examiners.

At the awards meeting a committee of 19 Principal/Chief Examiners, the Chair and Assistant Chair of Examiners and AQA's Subject Officers and a member of AQA's Research (Statistical) Department take part – the latter has the raw data and

analyses etc. on a laptop. On each paper members of the awarding committee consider scripts on a range of marks suggested by the Principal Examiner and the Research Assistant comparing the standard of work produced with that of scripts from the previous two sessions just getting the grades E then A. Examiners can also look at scripts outside this range if they wish. The Research assistant has determined their range of marks to consider and their recommended boundary (SRB) based on an analysis of those candidates who have taken GCSE Mathematics previously, their GCSE profile and their performance on the current paper using statistical analyses from previous sessions. This is to QCA's code of practice.

The committee comes to a consensus on the marks best representing a grade E and a grade A on the paper. At the end of the four day meeting the committee review their decisions in the light of the overall subject award and any recommendations from Research involving inter-board analysis. They also consider the results for different routes to A-Level choosing different applications combinations using distributions from common papers taken by these candidates and retrospective analysis from the previous session comparing performance across the boards. Adjustments are made if necessary (usually very minor) to bring everything into line with regard to the evidence of the scripts and the statistical analysis.

A meeting then takes place between the Chair, Assistant Chair, Subject Officers and a Deputy Director of AQA to discuss all issues and finalise the recommendations to the Director General of AQA which have always been approved.

At all times we are matching standards across strands within the Spec., from session to session and between boards at grade E and at grade A. The other grades are then determined arithmetically by dividing the mark gap between E and A by 4 rounded appropriately.

SECTION 4: THE WORK OF THE EXPERT GROUPS

4A GLOBAL PERSPECTIVES AND INDEPENDENT RESEARCH REPORT

4A.1 Prior to the meeting

Prior to this meeting some preliminary work was carried out. Pre-meeting papers were distributed, requiring members of the group to compare aims, content, study hours, relative size and assessment models of the Cambridge Pre U Global Perspectives and Independent Research Report in comparison with the GCE A Level in General Studies and Extended Project, and aligning the grading systems. Furthermore Expert Group members were asked to undertake a preliminary scoring of the qualifications against the UCAS Tariff domains.

4A.2 The Expert Group meeting

The session opened with a presentation from the examiners for the Cambridge Pre U Global Perspectives and Independent Research Report and the examiners representing the GCE A Level in General Studies and Extended Project qualification. These presentations provided an overview of the qualifications and allowed for Expert Group members to seek clarification on their design and structure. For the purposes of comparison the EG considered the Global Perspectives and Independent Research Project as separate but the purpose of this meeting was to arrive at an agreed UCAS Tariff point score for the stand alone component which incorporated the two elements as one qualification, hereafter referred to as GPR.

GPR was reported as having a total of nine grade spread across three subsets of Pass (P1, P2, P3), Merit (M1, M2, M3) and Distinction (D1, D2, D3) with students achieving one score upon completion of the qualification. The programme itself is a two year linear qualification that aims to teach critical thinking and research skills through the exploration of key themes of global relevance through the Global Perspectives component, in preparation of the demonstration of these skills during the in-depth exploration of an independently formulated research question in IRR.

The Global Perspectives (GP) component develops skills set through the exploration of real-world stimulus material which is ‘topical, global, informative and contentious’, with students expected to investigate the perceptions and different perspectives in order to present findings through presentations, short essays or group discussions. The process is repeated to cover at least four thematic areas. The GP component has three externally marked assessments:

- Examination: ability to discern and critique argument (25%)

- Short Essay: literature review-style, research, argument and reflection (30%)
- Multimedia presentation: structured, clear, contextualised (45%)

The GPR award as a whole has a four part assessment approach with the fourth assessment element being the IRR component in the second year of the programme.

The Independent Research Report (IRR) has a word count limit of 4500 – 5000. The report is based upon a question that the candidates set themselves in consultation with a mentor. It allows candidates to design, plan and manage the report and associated data collection, in order to evaluate and comment on findings and drew relevant conclusions. Candidates taking the Extended Project (the qualification to which GPR's Independent Research Project was compared) may also choose and design their own project which can be academically focused, as an extension of current studies or, covering something of personal interest. Like the IRR, the focus of the Extended Project is to develop independent learning and improve skills of research and evaluation. Unlike the EP, the IRR is always an extended academic research essay. The EP can have multiple outcomes, including submission of an artefact or performance.

The General Studies A Level has also been created to add breadth and encourage multidisciplinary skills of analysis and communication but through a broader and more prescriptive programme. The A Level covers specific topics and issues from two themes of 'Culture and Society' and 'Science and Society'. Due to the qualification at this stage appearing more prescriptive some members of the group reflected that the A Level appeared wider ranging and more substantial than the Global Perspectives.

The presentations allowed for the Expert Group Members to explore the qualifications, and in so doing commented that the students are effectively being trained through the Global Perspective component in the skills needed for the IRR. This development of critical thinking skills as well as research and enquiry skills, through 'deconstruction, reconstruction, reflection and presentation' was effectively missing from the Extended Project. While the examiner for the Extended Project did state that training was provided it was generally acknowledged that due to the shorter time frame this training would be more limited than that provided through GP[2].

The group also asked for details about the extent of the consultation with Higher Education about the design and structure of the qualification. It was stated that extensive discussions with at least 15 specific HEIs and through a variety of

[2] In the revised specifications for 2008 it is recommended that centres provide training for the Extended Project equating to approximately 20 GLH.

stakeholder groups had taken place and as a consequence the qualification focus had been developed.

4A.3 Comparison of aims

The group considered the design structure and the aims and purpose for the A Level and Global perspectives and the Extended Project and the Independent Research Report in detail following which the following tables emerged.

The group discussed and recorded the unique elements of design structure across each qualification, resulting in Table 19 (below):

Table 24: The structure of the qualifications- GPR, A Level and EPQ

Pre-U Global Perspectives	**A Level General Studies**
• 3 component structure • Assessed in one session (April, May, June) • Graded P, M, D • Flexible delivery/ assessment over 2 year study period • Re-sits permitted; second result counts[3] • Pegged to full Pre –U standard, but progressive design	• 4 units; 2 x AS, 2 x A2 • 2 assessment points with 4 external assessments overall • Graded A-U (units) • A* to whole A Level (from aggregated UMS) • Unit re-sits allowed • Assessment can be during or at end of course • Stretch and Challenge in A2 units • Tariff value of 120 points for A grade
Pre-U Independent Research Report	**Extended Project**
• Graded P, M, D • One assessment opportunity • Full Pre-U standard • Mentor submits research record; CIE Quality Assurance on brief and viva • Output –written report	• Grading A* - E • Assessment points January and June • Full A2 standard • Internally assessed/ externally moderated • Variety of outputs - eg written report, artefact. • Tariff value of 60 points for A grade
GP + IR = GPR award Overall GPR graded on point scale	

As GP and IRR have been designed to dovetail, this made the comparison of aims to existing qualifications difficult but it was clear to the group that the GPR as a whole had a progressive design, addressing the issues of synopticity. The group further explored synopticity within the A Level qualification and the issue of stretch and challenge was raised. It was agreed that both were present. The A Level examiner stated that some of the examination questions had to be reworded following concerns by the regulator that they were too hard. Stretch and challenge was also noted as being a main purpose of the Extended Project. It was reported within the meeting that stretch and challenge had been built into all components of the GPR.

[3] Unlike Pre-U Principal Subjects, which are entirely linear, it is possible to submit GP components a year ahead of the terminal assessment. Candidates may retake GP units, but the subsequent result has to count. If GP is taken in Yr12, it is possible to resit in Yr13 but all three units have to be taken, and the second result counts even if it worse. It is not possible to retake only one paper.

At this point the Expert Group explored the aims and purpose of the qualifications to justify claims made within the meeting thus far, resulting in Table 20.

Table 25: A comparison of the aims of the qualifications – GPR, A Level and EPQ

GPR	A Level
• Specific focus on preparation for HE and Life Long Learning • Cultivating inter-disciplinary perspective, independent outlook • Global focus • Higher order skills • Critical questioning approach • Communication/presentation skills (not just articulate in use of English Language but also structuring arguments) • Assessing evidence and claims, making logical arguments • Strong emphasis on independent learning	• Breadth to potentially narrow curriculum • Enhancing specialism • Cross issues in inter-disciplinary way • Engaging with contemporary problems • Understand contribution of different forms of knowledge • Global focus • Think logically, creatively, assess evidence, make informed judgements, justify conclusions
	Extended Project
	• Preparation for HE • Stretch and challenge • Independent learning • Enterprise

It was concluded that following the consideration of aims the GPR, against the A Level and Extended Project, were similar but also had a significant difference in terms of focus. This was specifically picked up in a comparison of the purpose of qualifications in question. The GPR, as part of the Pre-U (as indicated by the programme title) was aimed at developing learners and providing them with appropriate skills to gain entry to and make a success of their studies at Higher Education. While the group agreed that the A Level was taken as a post-16 education qualification its purpose was not just about progression to HE.

Essentially the aim of the GPR was acknowledged as being more focused on skills need for entry to HE, a very positive attribute in the qualification.

Importantly, on the basis of these deliberations the HE representatives agreed that the aims of the qualifications were broadly similar and had relevance for progression to HE.

4A.4 Determining size – comparison of guided learning hours (GLH)

It was felt that size, as represented by GLH, was a crude tool of comparison and members of the group were not happy to rely purely on this measure to compare the size of the qualifications. In addition it was stressed that the aim of GPR was to foster independent learning, a component that would not be addressed under the guise of GLH. These points aside the Expert Group members did discuss the GLH, per qualification, as reported on the National Database of Accredited Qualifications (NDAQ) and agreed early on in their discussions that definition of the term 'guided learning hours' meant the same thing across all qualifications considered.

With regard to the A Level, it was noted that the NDAQ stated a GLH figure of 360 hours and 120 for the Extended Project.

The GLH attributed to the different components of GPR were 120 for the IRR and 200 for the GP.

Using the GLH provided, it initially appeared that the GP was 56% of the size of the A Level and the IRR was, based upon GLH, the same size as the Extended Project. These percentages were acknowledged as correct arithmetic calculations but were considered arbitrary and inappropriate values without consideration of the content and assessment tasks.

4A.5 Determining size – breadth and depth of content coverage

The Group went onto consider the amount of content present in each specification to determine how 'big' the awards were in comparison to one another. The comment was made that the range of content within General Studies is broader than the content found within the GP. A Level candidates are expected to 'cover more but in less depth'.

It was felt that within the GPR programme understanding and skills are enriched through the iterative nature of the GP component, while in contrast a learner would be learning new subject matter within the A Level programme.

The Group discussed the fact that the Extended Project and GPR focused upon the development of skills, and fostering independent learning which made it challenging to make comparisons of content to aid the discussions on size.

The Group then settled on the regulator's (QCA) interpretation as highlighted within the allocation of GLH. As already evidenced, based upon GLH, QCA has deemed the A Level 'bigger' by virtue of allocating it a greater amount of guided learning hours.

4A.6 Estimating relative demand - comparing assessment objectives

The Expert Group members considered the assessment objectives for the qualifications and the information was displayed on a flip chart for consideration. This information can be found in Table 21.

Table 26: Comparing the Assessment Objectives GPR, A Level and EPQ

	Global Perspectives	Weight	A Level General Studies	Weight
AO1	Analysis and evaluation of arguments	27%	Demonstrate relevant knowledge and understanding applied to a range of issues, using skills from different disciplines.	30%
AO2	Analysis and evaluation of contexts	28.5%	Marshal evidence and draw conclusion: select, interpret, evaluate and integrate	35.5%

			information, data, concepts and opinions.	
AO3	Communication	19%	Demonstrate understanding of different types of knowledge, appreciating their strengths and weaknesses.	17%
AO4	Dispositions	25.5%	Communicate clearly and accurately in a concise, logical and relevant way.	17.5%
	IRR	**Weight**	**Extended Project**	**Weight**
AO1	Knowledge and understanding of the research process	15%	Manage	20%
AO2	Analysis	30%	Use resources	20%
AO3	Evaluation	30%	Develop and realise	40%
AO4	Communication	15%	Review	20%
AO5	Intellectual challenge	10%		

The group compared the objectives and agreed that there was a good match of terminology and weighting between objective 1 and 2 for Global Perspectives and objective 2 and 3 from the A Level.

There was extensive discussion about what was meant by the Global Perspective Assessment Objective (AO) 4 Dispositions[4]. It was stated that during the development stage it became apparent that teachers wanted evidence of real engagement with subject matter, and this was addressed through the disposition assessment element within the GP essay. Learners are expected to evidence how different opinions have been engaged with through sensitive and thoughtful evaluation of counter arguments and perspectives sometimes very different from their own. Because GPR aims at being a "transformative" educational experience, candidates are asked to show that they have sought to accommodate a variety of perspectives in coming to their own, well-thought-out and well-argued point of view.

It was then decided that the difference in assessment objectives between Global Perspectives and A Level are objectives 4 (Dispositions) and 1 (knowledge and understanding) respectively. The question was then asked whether 'Dispositions' is more valuable to HE than Knowledge and Understanding, or whether they are equally important. It was felt that it was inappropriate to answer this without an exploration of what AO1 Knowledge and Understanding actually entailed in assessment terms. The group was informed that the objective is addressed within the examination by way of responses to comprehension passages. Every essay also has a proportion of marks assigned to Knowledge and Understanding of the subject.

As an overall conclusion between GP and A Level, it was recognised that assessment objective 2 and 3 from Global Perspectives mapped to assessment objectives 3 and 4 of the A Level respectively. Following the discussions it was

[4] Dispositions – capturing the way that a candidate reflects on the experience of identifying and analysing different perspectives on contentious issues.

agreed by the HE representatives that both sets of assessment objectives were equally valuable, although there was the potential for a greater value to be given to 'Disposition' because it demonstrated that the learner could apply 'mature thinking'.

When considering the assessment objectives for the Independent Research Report and Extended Project it was very quickly agreed that there was a good match between the first assessment objective for the IRR and EP.

One group member did have concerns that there was a conceptual problem in comparing the wording of the qualifications and the group decided to explore what was meant by the terms used. It was stated that the first objective for the Extended Project 'manage' referred to the design and completion of the report, and all the processes involved from inception to completion. While objective 2 (for the Extended Project) 'Using resource and research' referred to actually obtaining the information for use within the project. Following this description it was commented that these two objectives, when combined, placed more emphasis on 'process'. Process did appear within the IRR Assessment Objective 1 but only carried the weight of 15% of the overall marks.

While one HE representative reiterated a concern that they felt the EP was heavier on the process side, one the whole the group very quickly came to the conclusion that AO1 -4 on both sides mapped. However, the IRR carried an additional objective (objective 5 'intellectual challenge') which emphasised the differences in skills and allowed for breadth within the learners' development.

Before the group went on to explore the assessment models it was agreed that the GP qualification was intellectually more demanding because it assessed more skills in a smaller qualification. It was able to do this because it did not have the same level of prescribed content as found in the A Level, for that reason it was agreed that the GP was smaller but denser qualification when compared to the A Level.

4A.7 Estimating relative demand – comparison of assessment models

The assessment models for the qualifications is summarised in Table 22 which enabled an in depth exploration of the differences between the qualifications.

Table 27: Comparing assessment models for GPR, A Level and EPQ

GPR	A Level	EP
50% internal,50% external	100% external	100% internal (externally moderated)
Components not units	4 units	One unit
All at Pre-U standard	Assessment at different levels – As and A2	EP is based upon questions set by candidates
	All of GS is in response to questions set by examiners,	

This process allowed for further questioning about the potential for candidates to re-sit components within the GPR qualification. It was confirmed that candidates could not re-sit components of GP but would have to resubmit the whole qualification, which can only be done once. This confirmation then led the group to discuss their opinions of modular qualifications, such as the A Level, versus the linear design of the GPR.

The HE representatives within the group had different interpretations of whether one style was more suitable for progression to Higher Education. One representative confirmed that they liked a linear style qualification; others confirmed a preference for modular qualifications. Additionally it was stated that retakes were not favoured by HE representatives.

It was accepted that such comments reflected the differences of HE provision. Bite sized chunks of learning does happen in some subjects and at some HEIs. Ultimately it would depend upon the learner and the course they were progressing onto.

As the qualifications are all new there was no candidate evidence to confirm that initial assessments of demand were appropriate. The group did at this stage consider the demand within the qualifications based upon the sample assessment material provided for each qualification. Details of the materials consider can be found in Appendix 2.

The group acknowledged the weighting of components within the GPR qualification as found in Table 23.

Table 28: Weighting of different components in the GPR assessment model

Component	Weighting
GP examination	12.5%
GP essay	15%
GP presentation	22.5%
IRR	50%

The large Expert Group split into three smaller groups to compare the A Level, the Extended Project and GP. The group considering the GP component confirmed that there was only one examination paper within the GP qualification. The question paper for the GP component required both short and long essay answers within a one hour and thirty minute examination. This was noted as shorter than the two hour examination found within the unit 4 assessment. It was further established that there were very few questions within the GP examination paper; however, the task itself was complicated, requiring both synthesis and evaluation. GP paper one requires candidates to read two lengthy articles which give arguments for different conclusions (on the same general topic) rooted in different perspectives. The questions require candidates to:

- evaluate the quality of the reasoning by considering flaws (such as post hoc reasoning, or slippery slope reasoning), analogies and the use of counter argument
- come to a reasoned judgement by comparing and evaluating the reasoning used in the development or articulation of the two perspectives and synthesising the information.

It was felt that on the whole the question types between the A Level and the GPR were similar but a strength of the GPR was this element of synthesis. Furthermore it was noted that the A Level candidates receive the stimulus material two months prior to the examination, while GP students receive pre released material for paper 3 four weeks in advance, but the Paper 1 exam is based on previously unseen material.

Another differences noted was that to do with choice. GPR candidates answer compulsory questions on Paper 1; on Paper 2 and for the IRR they have a free choice of topic; on Paper 3, candidates must choose a topic that 'arises from' the stimulus material. A Level students are required to answer compulsory questions on the stimulus material and then chose one question (from four) essay questions.

With the report component, as found in the Extended Project and IRR, candidates will complete the research on their own but they can consult with teachers about the formulation of the research question. It was agreed that there were limited difference in terms of inputs.

The group then explored the marking criteria, and it was felt that there might be a difference between assigning marks and grading. It was felt that there was more discretion for marking within the A Level, and markers are reluctant to use the top band. The point was endorsed by the agreement that the GP assessment grids are much more focused. It was said that the assessment within the A Level 'is slightly more diffused' and this would be due to the different nature of the qualifications.

In summary it was agreed that the assessment materials were similar, the assessment strategies were different. The examinations are similar but the essay and presentation are fundamentally different because the GP candidates set their own question. It was confirmed that the group cannot determine the skills set and demand placed upon candidates until they are provided with candidate evidence. The only evidence we have in terms of outcome is the GP marking grids, and the group view was that they are very specific.

4A.8 Estimating relative demand – aligning grades

The Group were notified that the PRE U GPR had already agreed with the regulator the mechanism to be used to fix the grading structure of the PRE U. The group was

informed that the particular grades of the Pre-U Principal Subjects and GPR would be pegged to the GCE A Levels based on using, in the first instance, archived A Level exam scripts to align the A Level A/B boundary to the D3/M1 boundary in the Pre-U, and the E/U boundary in the A Level with the P3/Fail boundary in the Pre-U.

It was agreed by the group that trust should be placed in the regulator to ensure that the mechanisms are appropriate and agreed that the GPR grades align to the A Level grades as follows:

D3 –A/B
P3 - E/U

The additional grades values would be allocated arithmetically following additional consultation with HE representatives and the Chief Examiners.

4A.9 Scoring the qualifications using the Tariff domains

Due to the standard of the returned preparatory work not a great deal of time was spent on this aspect of the methodology. The outcomes of the preparatory work were displayed for consideration and agreement by the Expert Group members. The final positions in respect of domain scoring values are shown in Figures 2-5.

Figure 2: Tariff domain scores – Pre-U IRR

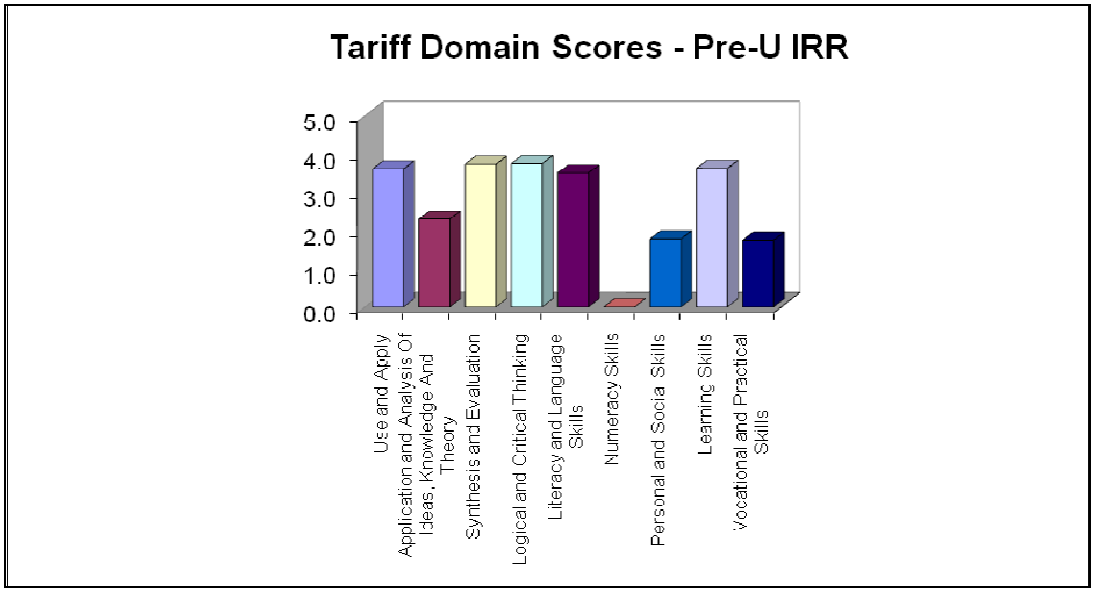


Figure 3: Tariff domain scores – Extended Project Qualification

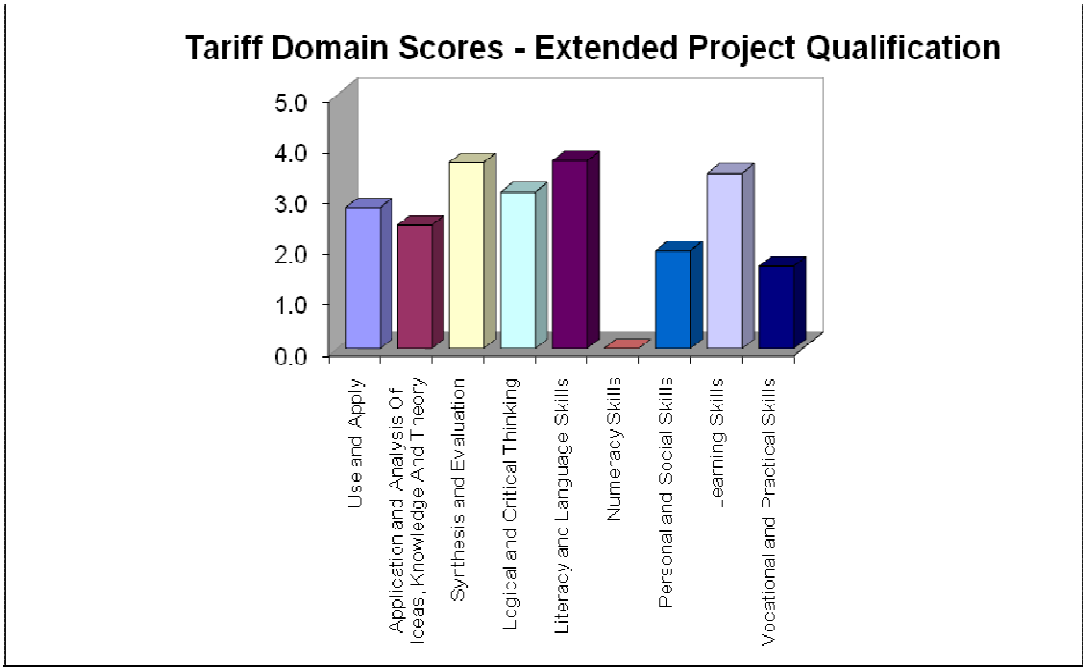


Figure 4: Tariff domain scores – Pre-U Global Perspectives

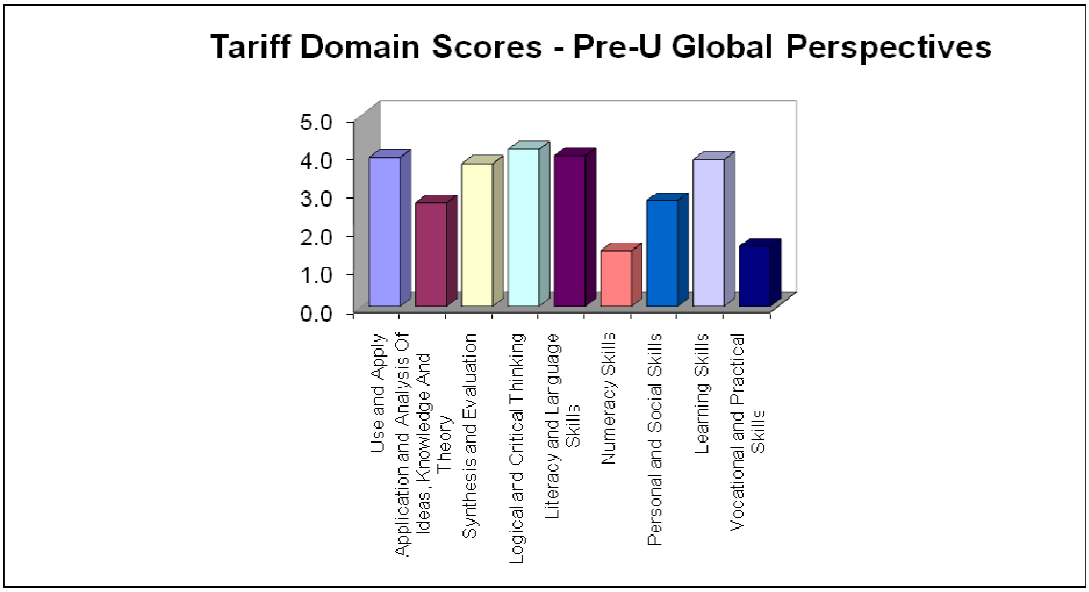


Figure 5: Tariff domain scores – GCE General Studies A Level

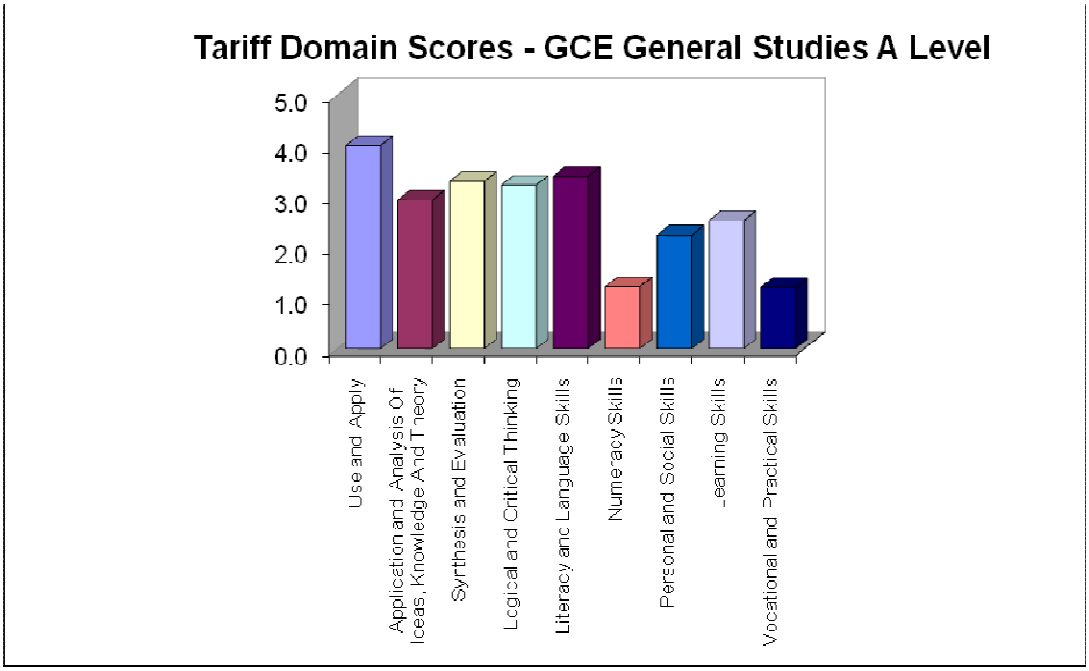


Table 29: Tariff domain scores- GPR, A Level, EP

	Pre-U IRR	Pre-U GP	Extended Project	GCE A Level
Use and apply	3.6	3.9	2.8	4.0
Application and analysis of ideas, knowledge and theory	2.3	2.7	2.4	2.9
Synthesis and evaluation	3.7	3.7	3.7	3.3
Logical and critical thinking	3.8	4.1	3.1	3.2
Literacy and language skills	3.5	3.9	3.7	3.4
Numeracy skills	0.0	1.4	0.0	1.2
Personal and social skills	1.8	2.8	1.9	2.2
Learning skills	3.6	3.8	3.5	2.5
Vocational and practical skills	1.8	1.6	1.6	1.2

4A.10 Allocation of UCAS Tariff points

At the end of the Expert Group meeting no recommendation was made for the allocation of UCAS tariff points. To derive such a recommendation I suggest that we follow the grade alignments recommended by QCA and corroborated by CIE: D3 will align with the A/B boundary and P3 with the E/U boundary. D2 is then intended to align with the A*.

We have been informed that the mechanism to fix or peg particular grades of the Pre-U GPR to the GCE A levels are: (a) to use archived A level exam scripts in the first instance to align the A level and the grades in the Principal subjects of the Pre-U and then (b) link the Independent Research Report (IR) and Global Perspectives' (GP) grade boundaries at D3, M3 and P3 to the Principal Subjects via syllabus pairs analysis and prior attainment data. This process has been approved by the regulator, the QCA. Given that we can trust these arrangements and that they will be properly

assured by the QCA then Table 25 provides a 'solid' starting point for our discussions. We have two fixed judgemental points, the A/B (120 UTPs) and the E/U (40 UTPs) boundaries.

Table 30: Pre-U and A level grade alignments

Pre –U Grade	A level Grade	UCAS Tariff Points	Comments
D1			
D2			
D3	A/B	120	Judged alignment using archived scripts and other evidence
M1			
M2			
M3			
P1			
P2			
P3	E/U	40	Judged alignment using archived scripts and other evidence

Note: This is a 'volume free' measure

Given that we accept this alignment and that it fully captures the demand of the GPR (which it should do given the grade alignment) then the issue remains the size of the GPR relative to a GCE A level. We have two components:

GP = 200 GLH = 56% of an A level
IR = 120 GLH = 33% of an A level
Combined = 320 = 89% of an A level.

This I would suggest represents the base line measure of size. If we were to use this measure then D3 on GPR would equate to 107 UCAS Tariff Points. However, when dealing with the Extended Project (EP), that expert group agreed that the Extended Project's utility for supporting progression to HE was greater than 40 UCAS tariff points (taken from a GLH analysis) at Grade A because of the value of the skills being developed for HE study. The same could be said of the IR component of the GPR. Nonetheless, we do need to bear in mind that an EP candidate has to submit more material than the outcome of their project, for example a detailed log, and they have to make a presentation about their work which acts as a viva voce to ensure that the work is their own. Such a viva voce is not a requirement for the Pre-U candidate. The IR candidate only has to submit the outcome of their research, a 4,500-5,000 word report – as outlined in Table 31.

Table 31: Assessment components: Pre-U GP and IR, A level General Studies and Extended Project

Pre-U GP assessment components	GCE A level
Exam Essay Presentation (about different investigation)	4 external unit assessments
Pre-U IR Assessment components	**Extended Project**
4,500 – 5000 word research report Teacher Statement	Project log Project outcome (could be 4000-5000 word report)

Viva strongly recommended	Presentation (part of undertaking the EP)

In summary, the discussion around these issues took the following form. First we noted that since the Extended Project had been increased to be half an A level to represent its additional utility for supporting progression to HE, we could do the same for the IR as it was felt that both were assessing similar skills. This would take us to 127 UCAS Tariff points for GPR. In addition there was the extra AO5 in the IR which was not matched in the EP.

Set against this increase in the overall Tariff points available for D3, was a concern from one HE representative as to the credibility of such a finding with other HE colleagues and the political challenges that such a decision might produce. On the basis of this he suggested that we should not, in the absence of candidate evidence, go above 120 UTPs for D3, which means that D2 and D1 would go beyond 120.

In addition, the Chief Examiner for the Extended Project pointed out the additional material that the EP candidate had to submit (see table 26). For the sake of argument if we were to accept that the presentation component in the EP matched to the presentation component in the GP, then we would need to reduce the size of the GP to take account of this in order to increase the size of the IR to match that of the EP (this effectively means shifting the presentation in the GP to the IR in Table 26). That would still leave, however, the production log as an additional assessment item in the EP which does not appear to have an analogue in the IR.

On the basis of a review of the all the available evidence the recommendation is that the GPR component does have slightly greater utility for supporting progression to HE than signalled by an allocation of 120 UCAS tariff points. This additionality can be best represented by taking account of the extra volume of the Global Perspectives component and fixing the D3 value at 126 UCAS tariff points. The P3 value would then be 42 UCAS Tariff Points. Other values between D3 and P3 can be established by interpolation (see Table 27). The value for D2 in Table 3 is then found by extrapolation, based upon the agreed relationship between D2 and A*. As with the principal subjects, no extra allocation of UCAS tariff Points will be made to D1 until such time as candidate evidence and a grade profile of candidates becomes available.

Table 32: Recommended UCAS Tariff points allocations to the GPR component

Pre –U Grade	A level Grade	UCAS Tariff Points	Comments
D1		140	
D2		140	
D3	A/B	126	Judged alignment using archived scripts and other evidence
M1		112	
M2		98	
M3		84	

P1		70	
P2		56	
P3	E/U	42	Judged alignment using archived scripts and other evidence

4B BIOLOGY

4B.1 Prior to the meeting

Prior to this meeting some preliminary work was carried out. This included mapping the Cambridge Pre-U Diploma (Principal Learning subject: Biology) against the Edexcel Advanced GCE in Biology, reports from three HE representatives highlighting similarities and differences between the two qualifications and comparative studies from a representative from each Awarding Body. Pre-meeting papers were distributed, requiring members of the group to compare aims, content, study hours, relative size and assessment models of the Pre-U Diploma and that of the Biology GCE A Level.

4B.2 The Expert Group meeting

The Expert Group met on one occasion for two days (Wednesday 4 June and Thursday 5th June 2008) to examine and discuss the evidence listed in Appendix 2 and the preparatory work completed by group members. This section contains an account of the deliberations of this meeting.

The opening session provided an opportunity for the Edexcel Chief Examiner and the Cambridge International Examinations (CIE) Chief Examiner to present their qualifications and for Expert Group members to seek clarification about general issues in relation to the awards.

The Pre-U qualification is a linear qualification taken over two years. The Principal Subject forms part of the Diploma and allows for subject specialism. Candidates choose which subjects they wish to study from a choice of 26 subject Principal Subjects. A minimum of three Principal Subjects must be passed to be able to achieve the Diploma, although other qualifications may be credited within the Diploma where tariff values can establish a clear equivalence, for example, substituting up to two A Levels in place of Principal Subjects. There is no upper limit on the number of Principal Subjects candidates may take. Other parts which make up the Diploma include the Independent Research Report and Global Perspectives. All the external examination components are taken at the end of the two-year course in one examination session. All candidates must pass a matriculation stage which can be taken at any point in the two years. The matriculation stage does not receive a grade. The qualification is graded Pass 3 (P3 - lowest) up to Distinction 1 (D1 – highest). P3 will be aligned to A Level Grade E and D3 to Grade A at A Level. Further

that grade D1 is a judgemental grade boundary that will be set in such a way as to ensure that the grade below, D2, has equivalence with the new A* at A Level. To pass the Diploma, a candidate must achieve at least P3 in all five components (including 3 Principal Subjects (or equivalent), Global Perspectives and the Independent Research Report). The Principal Subjects are assessed externally and candidates do not have an opportunity to re-sit examinations.

The Edexcel Biology A-Level qualification is a modular qualification with students having to take 3 mandatory units in the first year (AS-level) and a further 3 mandatory units in the second year (A2-level). Units are assessed at the end of each year. The qualification is graded A* to E. 80% of units are assessed externally and candidates have the option to re-sit individual units.

General issues raised:

- The Edexcel Biology specification has evolved from what was the Salters-Nuffield Advanced Biology (SNAB) specification which has resulted in a more context-led syllabus with a more thematic approach and innovative assessment (see section 4.5 for Assessment). Whilst the taught skills remain the same, the same content has been re-arranged into a more format known as the 'concept' route. The Edexcel Chief Examiner commented that this has resulted in a new qualification that still fits within the A Level framework but is more closely aligned with the Pre-U in terms of some aspect of its style. It should therefore be flagged that the Edexcel Biology specification has a number of features which may mean that it is not entirely reflective of the 'typical' A Level and it is recommended that when the Pre-U comes to be 'Tariff reviewed' in 2010/11, other Awarding Bodies, such as AQA, are also involved in the benchmarking process.
- There is only one examination for both the SNAB course and the new Edexcel course. It retains some of the feature of the SNAB and the traditional Edexcel examinations which it replaces.

Following the two presentations, the Group discussed the similarities and differences between the design of the Pre-U and the A Level qualifications – as illustrated in Table 28.

Table 33: Biology qualifications – comparative design

Pre-U Biology	**GCE A Level**
Similarities	
Teaching approach: context and concept	Teaching approach: context and concept
Assessment Objectives AO1 and AO2: - Knowledge with understanding - Analysis and application (discussed in more depth in section 4.5 'Comparing assessment models')	Assessment Objectives AO1 and AO2: - Knowledge and understanding of science and how science works - Application of knowledge and understanding of science and how science works

Differences	
Essay as part of assessment (15%) – (1/3 of Paper 3 and part of plan in Paper 4)	No essay question as part of assessment
Guided Learning Hours (GLH): 380	Guided Learning Hours (GLH): 360
Linear qualification taken over two years	Modular qualification taken over two years
Grading: Distinction, Merit, Pass (D1, D2, D3, M1, M2, M3, P1, P2, P3)	Grading: A* - E
Not unitised: 6 sections of syllabus content	Unitised: 3 units at AS level , 3 units at A2 level
No opportunity to re-take exams	Option to re-take examined units
Compulsory matriculation[5]	No matriculation
Developed own subject criteria	Follow QCA requirements for GCE subject criteria
All Principal Subject examinations take place at the end of the course	Assessment available in January and June of each year.
No opportunity to re-take exams	Option to re-take examined units
All assessment synoptic	A2 paper synoptic
100% external assessment	80% external assessment, 20% internal assessment – internal assessment in second year of course (coursework)
Practical assessment through the practical can do tasks in the compulsory matriculation and through a formal practical exam (paper 4, section A laboratory skills, Section B planning and analysis)	Different ways of assessing practical skills (involving Pre-U Compulsory Matriculation, Paper 4 and Edexcel Units 3 and 6)
No Coursework	Unit 6: Coursework: personal study (project). Substantial piece of work (10%) written up as science paper

4B.3 Comparison of aims

The Group then moved on to discuss and compare the aims and purposes of the two qualifications. The two Examiners opened up the discussions by providing an overview of the aims, and the HE representatives were asked to comment on the extent to which these reflected the fundamental aim of supporting progression to Higher Education. It was agreed that the central aims of both qualifications are similar, in that they both seek to stimulate and motivate students to develop an interest in Biology, to appreciate the importance of Biology in society and to develop laboratory skills and interpretation of data. Both courses state that they aim to encourage the development of analysis and independent learning skills within their aims:

Pre-U:

- 'Such variety in delivery will also provide scope for differentiation, encouraging the more self-motivated candidate to explore a topic in greater depth' (p.5 of Pre-U syllabus)
- and 'Key features of the Biology syllabus include an exciting assessment framework featuring can-do practical and research tasks (…) and a wide range of laboratory and higher-order practical skills' (p.7 of Pre-U syllabus).

A Level: (Visit or issue report):

[5] Compulsory, non-certificated component consisting of can-do tasks which candidates must complete in order to be eligible to enter the examinations. There are two categories of task required - practical tasks and Communication tasks.

- 'The visit or issue addressed is intended to bring a student into contact with a 'real-life' example of biology in use' (p.79 of Edexcel syllabus) and 'carry out experimental and investigative activities, including appropriate risk management, in a range of contexts' (How Science Works learning outcome 4, p.125 Edexcel syllabus).

The HE representatives were invited to put forward what they consider to be important in preparing students to go on to study a course in HE. The key elements agreed by all three of the HE representatives were:

- Independent and autonomous learning
- Taking responsibility for their own learning
- Flexibility
- Research skills
- Intellectual risk-taking

The Group then compared how the two qualifications could adequately reflect the extent to which the requisite skills were reflected in the two specifications.

Table 34: Comparison of aims, strengths and weaknesses- Biology

	Pre-U Biology	**GCE Biology A Level**
Aims	• Primarily to prepare for HE • Specific focus on skills which encourage independent learning, practical application and deep understanding and enthusiasms	• Preparation for HE as well as a school-leaving qualification • Implicit aim to develop independent learning • Aims limited to the full range of GCE grades (maximum A*)
Strengths	• Opportunities for fieldwork (explicitly identified within Pre-U syllabus) (outlines expectations) • Can be delivered flexibility in delivery through non-modular structure • Students encouraged to take responsibility for their own learning (evidenced on p9 'Aims' of syllabus) • Skills development made more explicit throughout course • Development of a range of more practical skills • Matriculation	• Opportunities for fieldwork (explicitly identified within Edexcel syllabus)[6] • Visit Report (AS) • Coursework • Learner material to encourage autonomous learning • Developing an interest in further study and careers in the subject
Weaknesses	• Immature qualification • Non-assessed nature of the Matriculation (although this could also be seen as a strength)	• New A Level Biology specification • Dedicated text book and teaching to the text. • Discourages risk-taking • Skills development more implicit than the Pre-U • Short-answer questions on the papers could encourage learning 'parrot fashion'
Support for HE progression	• Encourages risk-taking and creativity • Developing autonomy by not relying solely on teaching to the test (e.g. Matriculation)	• Visit report/coursework encourages research and analytical skills

[6] diversity across awarding bodies

	• HE confident that applicant grades reflective of abilities rather than being re-taken a number of times	

There was much debate within the Group about independent learning and whether or not it could be assessed and quantified. Through discussion, it was felt that independent learning could be reflected through the candidate being able to evaluate and opportunities to work autonomously and flexibly. HE reps thought that the combination of communication tasks in the matriculation, synoptic assessment outlined at the end of each section and time freed up by the linear structure in the Pre-U encourages more independent learning than in the A Level.

Discussion was also held around the Matriculation element of the Pre-U. Interestingly, HE opinions of the matriculation swung from initial thoughts of it being unsuitable for HE (non-assessment would mean it would be difficult to measure) to a complete turn around in that it would encourage autonomy and the non-assessment would nurture independent learning. HE representatives felt that it would be useful in helping them understand the level of skills achieved by a candidate although they did feel that the fact that it could be taken at any time during the two years contradicted the idea of it being a 'matriculation' where it had to be passed before a candidate could progress to the next stage.

The new Edexcel A Level specification follows a more traditional format known as the 'concept' route. Each route, context and concept, is supported by a dedicated text book. This was felt by HE representatives to act against encouraging autonomous learning and there was concern that individuals could learn 'parrot fashion' in order to pass the exam rather than being encouraged to develop their own critical thinking skills.

The Group agreed that the Pre-U was more suited to teaching the specific skills required for HE.

4B.4 Determining size

4B.4.1 Comparison of guided learning hours

The Pre-U Diploma is 380 guided learning hours (GLH) in comparison to the A Level which is 360 GLH, equating to a difference in 20 GLH.

4B.4.2 Breadth and depth of content coverage

The following exercise mapped the content and depth of coverage between the two qualifications. Where differences were highlighted, HE representatives considered the utility of these syllabus areas for progression and preparedness for studying the course at HE level. Table 35 illustrates these discussions. Where one qualification

includes greater level of content than the other, the "Utility for HE" column has been completed to highlight whether such content provides extra utility for HE. Comments from HE reps have also been incorporated where appropriate.

Table 35: Biology content and depth

Syllabus area	Pre-U	A Level	Location	Utility for HE
Eukaryotic cells/membranes	✓	✓		
Biological chemicals	✓	✓		
Enzymes	✓ > in Pre-U	✓	Pre-U: 1.3 J-R Edexcel: U1, 2.2 – 2.9; U4, 3.16	×
Protein Synthesis	✓	✓		
Mitosis/Stem cells	✓	✓		
Sexual reproduction	✓ > in Pre-U Significance in evolutionary terms	✓ Basic level	Pre-U: 4.2 A-P Edexcel: U2, 3.10	✓
Mass transportation	✓ More in Pre-U	✓	Pre-U: 2.5	✓ Increased knowledge on plant biology important for HE
Nerves and muscles	✓	✓		
Immunity	✓ More in Pre-U	✓	Pre-U: 2.8 E-H Edexcel: U4 6.12 – 6.15	✓ V.useful for Bio-Medical Sciences
Respiration	✓ More in Pre-U	✓	Pre-U: 3.1 C-D, F-K Edexcel: U5, 7.5 – 7.11	✓
Photosynthesis	✓ Greater depth in Pre-U	✓	Pre-U: 3.1 – 3.3 (all) Edexcel: U4, 5.2 – 5.6	✓ More time on biochemistry provides utility
Natural selection & evolution	✓ More in Pre-U	✓	Pre-U: 4.1 L-X Edexcel: U2 4.15; U4, 5.21 – 5.22; U6, 6.16 – 6.19	✓
Bio-diversity, adaptation, conservation & Ecology	✓ More in Pre-U	✓	Pre-U: 5.1 Edexcel: U2, topic 4; U4	✓ Keystones of life – considered v imp. by HE
Gene technology	✓ More in Pre-U	✓	Pre-U: 6.1 Edexcel: U1, 2.18; U4, 6.5-6.7; U5, 8.21	✓ Underpins concepts
Control of gene expression	✓ > in Pre-U	✓	Pre-U: 2.2 G Edexcel: U5, 7.17	×
Prokaryotic cells	✓	✓	Pre-U: 1.3 E-H Edexcel: U2, 3.2	✓ Diversity issues important for HE
Lifestyle biology		✓		✓
Plants, fibres, uses		✓		✓
Primary production		✓		×
Carbon cycle (fieldwork)		✓		✓
Forensics		✓		×
Muscles & joints		✓		✓

Human brain		✓		✓
Origin of life	✓			✓ This is crucial and not included in GCE
Microscopy	✓			
Blood physiology	✓	✓	Pre-U: 2.5 C&D Edexcel:	✓ Biochemical approach to haemoglobin important (not present in GCE)
Transplants	✓			✓
Nutrition	✓			✓
Kidney	✓			✓
Genetics	✓	✓	Pre-U: 4.1 A-K Edexcel: U1, 2.15	✓ Pre-U works on principles which is important

The Group were encouraged to focus their discussions on whether the differences between the two syllabuses equated to the additional 20 GLH in the Pre-U as determined by QCA, whilst taking into account the utility for HE. From the exercise, it is evident that the Pre-U covers more content – either more depth on the same topics or additional topics. The Group discussed whether this would equate to 20 hours more to cover the additional material with the over-arching consensus that 20 hours more teaching in the classroom would not necessarily make the candidate any more prepared for HE. Reducing classroom hours in order to allow time for personal interests such as sport or music was considered to be of equal importance. Discussion came back to the 'something extra' that would be required, and could be potentially reflected in independent learning.

Whilst many content areas between the two qualifications were considered broadly similar, most of the differences lay in depth of detail and appropriateness for HE, for example, the origins of life which is offered only by the Pre-U and considered to be crucial by all HE representatives. Also included in this list are Nutrition (more detail of the digestive system), Photosynthesis (including photorespiration and C3 v C4 plants) and the Ecology section of the Pre-U with regards to Biodiversity.

The Group agreed that there was more content in the Pre-U which would not be covered by 20 GLH alone. The additional time could be partly attributed to the fact that the candidates would not 'lose' 6 weeks off timetable for AS exam preparation and study leave. Taking this into account, and the additional work contained within the Pre-U syllabus, the Group came to a consensus that the Pre-U principal subject was 15-20% larger than that of the A Level, having taken into account content, size, depth, utility for HE and scope for allowing independent learning.

4B.5 Estimating relative demand – comparing assessment models

The Group discussed in what ways the assessment objectives for the qualifications are similar and different in terms of their purpose and sought input from the HE representatives as to what the impact of these differences would be on the relative utility for supporting progression to Higher Education. Consideration was also given to the weighting of the assessment objectives as illustrated in Table 31.

Table 36: Comparison of Assessment Objectives- Biology

	Pre-U	**Weight**	**A Level**	**Weight**
AO1	Knowledge with understanding	40%	Knowledge and understanding of science and how science works	30% -34%
AO2	Analysis and application	45%	Application of knowledge and understanding of how science works	38% -44%
AO3	Practical skills	15%	How science works	27%

There was general agreement that both qualifications' assessment objectives were similar in their objectives but achieved in different ways. It was felt that the biggest differences were in AO2. For example, in the AO2 for the Pre-U, candidates were encouraged to develop their hypothesising skills through more open-ended study (p10 of the syllabus). A Pre-U Representative confirmed that the structure of the questions in section 3 of paper 3 meant that candidates must have undertaken some open-ended study in order to be able to pass the paper. Whilst the A Level also requires candidates to apply knowledge and write in prose, much of the contextual element might be lost with the replacement of the SNAB by the new A Level.

There was discussion relating to the development of laboratory and field skills. Both the A Level and the Pre-U assess candidates' laboratory skills: A Level does so in the project within AO3 How Science Works, and the Assessment Objectives for Practical Work in the Pre-U are broadly the same as in this strand of the Edexcel A Level. The Pre-U, in addition, assesses many practical skills in the matriculation element through teacher assessment of performance through practical work. One of the HE representatives asked what quality assurance existed for the matriculation since this was not examined and was internally assessed. One of the representatives from the Pre-U stated that there was no requirement to assess the quality of the work carried out for the matriculation, although he believed that this would be shown by the exam results; if a candidate fails to do the practical work, it is unlikely that they will be able to do the exam. Students are also required to answer a planning question as part of the exam which requires candidates to reflect on their practical experience. As part of the assessment of practical work in the A Level, there is a section where the teacher has to observe competence. Candidates' understanding of How Science Works is also tested through the issue report, practicals and questions in written papers. The HE representatives all felt that evidence of practical skills would be welcomed in students entering into HE and favoured practical exams to reports in this context.

4B.6 Estimating relative demand – comparing assessment requirements

This task required the group to focus on estimating the relative demand of the two qualifications by comparing examination requirements such as structure, question papers, and mark schemes, as well as comparing the assessment models. Again, HE representatives' comments were sought on the comparative utility between the two models for progression to HE. Table 32 illustrates the differences:

Table 37: Comparisons between assessment models – Biology

	Pre-U	**A-Level**
Assessment materials	1-2 mark questions: 24% of total assessment material (including multiple choice paper) 3-4 mark questions: 20% of total 5-7 mark questions: 28% of total 8+ mark questions: 27% of total (including a 30 mark essay on paper 3)	1-2 mark questions: more than 25% of total assessment materials (including multiple choice occasionally in Unit 2, Q5, Q8 & Unit 4, Q1)
Mode of assessment	No. units internally assessed:0% No. units externally assessed: 100% (papers 1, 2, 3, & 4) Assessment at end of 2 years No re-sit opportunities Practical exam: 15% Necessary to pass matriculation (paper 0)	No. units internally assessed: 20% No. units externally assessed: 80% (units 1, 2, 4 & 5 inc. project) Assessment modular (at end of yr 1 & yr 2 – AS & A2) Opportunities to re-sit A2 Project: 10%
Mark schemes	1 mark answers = 50 > 5 marks = 53% (paper 2) >8 – 15 mark answers = 27% 30 mark essay	1 mark answers = 70 > 8 marks = 0 Highest total mark answers = 7 No essay

In considering the differences, the HE representatives highlighted some issues which were discussed amongst the group in terms of estimating the relative demand:

- Does it matter how a candidate reaches the end mark?
- Phrasing of questions – do they encourage candidates to answer questions by recall?
- Can candidates still respond to essay questions through bullet points?
- Rigour of marking is crucial
- Scope for teacher intervention
- Opportunities for creativity
-

The HE representatives discussed these areas with the Group and it was concluded that HE favours assessment which encourages candidates to be creative and to think independently, as well as develop practical skills. This can be evidenced in practical assessment and opportunities for extended writing. The general feeling was that the Pre-U develops more laboratory competencies through its matriculation element and the planning question, whilst the A Level does so in its project. Within the Pre-U practical exam, each question is tied to the learning outcomes which is unusual in that it helps to tie it back to practical skills in the syllabus. It was agreed that the Edexcel A Level allows candidates more opportunity to be creative through practical

skills that they may develop through personal study (rather than the more structured style within the Pre-U matriculation). It also encourages the creative side of science, for example, hypothesis-building.

There is opportunity within the over-arching Pre-U Diploma for the development of more creative and research skills but a strategic decision had been made by the Pre-U to pull coursework out of the assessment within the Principal subject to allow for more effective research in the 'Global Perspectives' component of the overarching Diploma structure The Group were reminded in this stage of the discussion that just the Principal Learning of the Diploma should be focused on for the purposes of this expert group rather than the Diploma as a whole. Overall, it was felt that the Pre-U provided more opportunity for creativity through its matriculation element and the Independent Research Report.

Discussion regarding the importance of how a candidate reaches their final mark concluded that it is of importance to HE in that they do not want candidates to have just answered short-answer questions to be assured that students have not just answered the questions by recall. It was felt that A Level candidates would be more likely to be able to answer questions by recall than Pre-U candidates due to the higher number of short answer questions in the A Level, and the lack of an essay or planning question although this was less the case for the SNAB exam in comparison to other A Level awarding bodies. The HE representatives also felt that the mode of assessment in the Pre-U (0% internally assessed) meant that there was less scope for teacher intervention than in the GCE A Level (20% internally assessed under controlled conditions). HE reps viewed external assessment to be positive in helping prepare students for HE where there is minimal/no scope for correcting drafts before submitting assignments for assessment.

With regards to candidates answering in the form of bullet points in a longer answer/essay question, this would be possible but would not secure a student maximum marks. For the Pre-U, specimen materials and mark schemes ensure that specific marks are given for argumentation and someone on a pass/merit boundary would not have such skills.

In terms of synopticity, the Edexcel Chief Examiner did highlight that it is a QCA requirement that the A2 paper pulls in elements from the AS and that all A2 papers are synoptic. Whilst synopticity is required in A2 assessments, the HE representatives believed it to be inherently present in all the Pre-U papers since these include numerous questions from throughout the assessment in which students draw on varied material from across the syllabus and bring together two years' work in responding to specific questions.

Conclusions from the HE representatives were as follows:

- Pre-U asking more stretching questions
- Pre-U similar to an under-graduate exam with the medium-sized questions
- A Level candidates would be able to answer more questions by re-call
- Opportunity for more creative study in A Level through personal study
- Pre-U considered to bring more of a suite of skills to HE as evidenced in the paper 0 component (Matriculation) and the assessment materials (grown out of the international A Level)
- Less scope for teacher intervention in the Pre-U and therefore work more likely to be a closer reflection of the candidate's skills
- HE favours the synoptic assessment of Pre-U
- Modularity of the A Level more suited to the 'weaker' students whereas stretch of the Pre-U more suited to the 'stronger' students.

HE representatives felt that the level and depth of questions did equate very fairly and they were impressed with the level of demand in the question papers by both qualifications. The longer answer papers in both the Pre-U and the A Level were considered of great utility by HE and reflected valued opportunities for development of essay writing and argumentation.

4B.7 Estimating relative demand – comparison of candidate work

Because both qualifications are new and first teaching has not yet taken place, there was no candidate evidence available. In the circumstances the Expert Group concluded that its recommendations must inevitably be provisional and that it would be necessary to review them as soon as sufficient candidate evidence becomes available.

4B.8 Aligning grades

The Pre-U Grades Descriptions follow the same format as the QCA Performance Descriptions in that they refer to AO1, AO2 and How Science Works. In the light of the paper circulated to the group by Dr Hayward indicating that, in the absence of candidate scripts, it would be necessary to trust the alignment of the A Level A/B boundary to the D3/M1 boundary in the Pre-U, together with the E/U and P3/Fail boundaries, on the basis of what had been accredited by QCA, no consideration of grade alignment was undertaken by the group.

The statements that cover experimental activities in the Pre-U Grade Descriptions are broadly similar to the Performance Descriptions for How Science Works. QCA Performance Descriptions describe the typical performance at the A/B boundary and at the E/U boundary as illustrated in the following table:

Table 38: Aligning grades – Biology

Pre-U	A Level	Tariff points
D1		146
D2		133
D3	A/B	120
M1		106
M2		93
M3		80
P1		66
P2		53
P3	E/U	40

Having already determined the size of the Pre-U to be 15-20% larger than an A Level, the Group were now requested to consider how that 15-20% equated in terms of extra value and how this would affect the equating of Tariff points. Questions to be considered by the Group included:

- Is a 20% increase in size equivalent to 20% increase in Tariff points?
- If candidates do know 20% more content, does that help HE?
- Should 20% be added to the scores in the above table?

To help answer the above questions and hence decide on what multiplier (if any) should be added to the new qualification's scoring, the HE representatives were asked to re-cap on what they consider to be of utility to HE progression and then consider the extent to which such factors were more evident in one qualification than another, and finally to agree on how this could be reflected in terms of additional (if any) Tariff points.

Table 39 : Utility for HE Progression - HE representatives' opinions- Biology

Pre-U	A Level
Matriculation	Project
Linearity	Site visit
30 mark essay question	Creativity
Areas of knowledge – greater depth in key areas of importance for supporting progression to HE	
Practical skills	
Independent learning	

4B.9 Domain Scoring

The Group reviewed the preparatory work of the domain scoring task and confirmed the scoring as displayed in the graphs below:

Figure 6: Tariff domain scores – Pre-U Biology

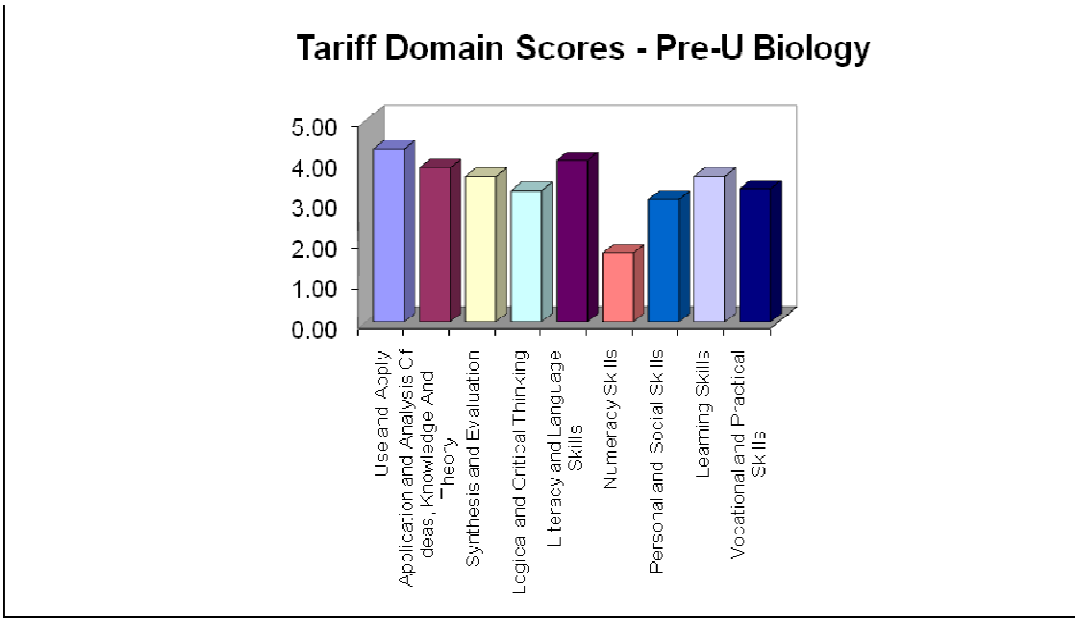


Figure 7: Tariff domain scores – GCE Biology A Level

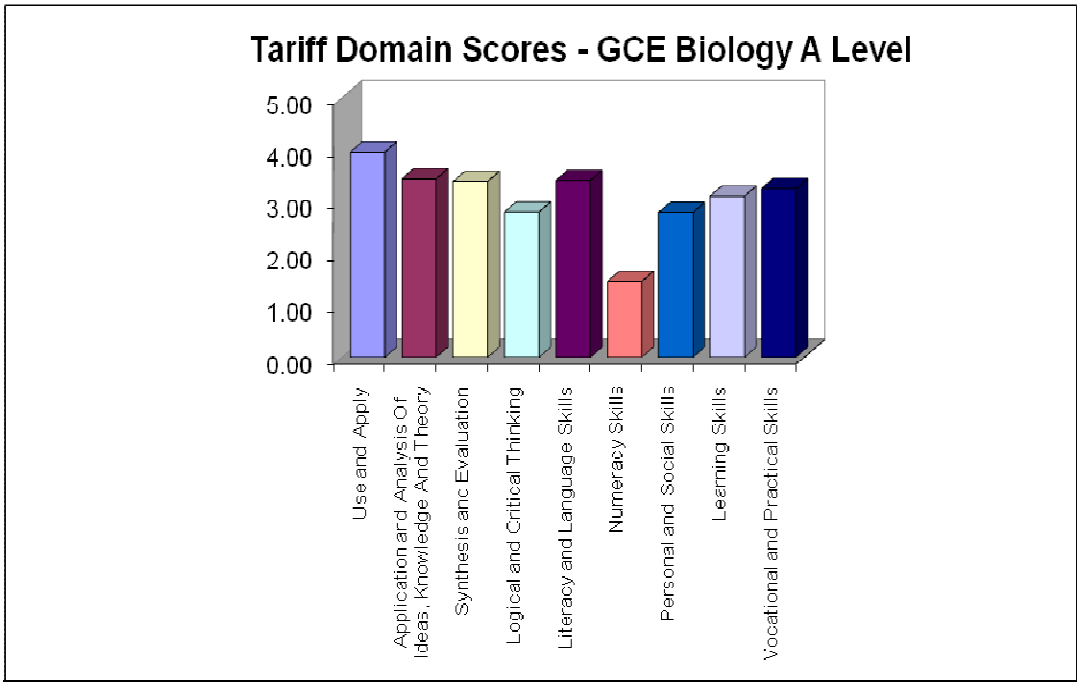


Table 40: Domain scores summary – Biology

	Pre-U	GCE A Level
Use and Apply	4.3	4.0
Application and Analysis Of Ideas, Knowledge And Theory	3.8	3.4

Synthesis and Evaluation	3.6	3.4
Logical and Critical Thinking	3.3	2.8
Literacy and Language Skills	4.0	3.4
Numeracy Skills	1.7	1.5
Personal and Social Skills	3.0	2.8
Learning Skills	3.6	3.1
Vocational and Practical Skills	3.3	3.3

The results from the domain scoring exercise showed that Pre-U consistently scored higher than A Level in all but one category. The mean scores reflect opinion that numeracy skills were fairly low in both qualifications. Interestingly, the domain scoring exercise produced exactly the same 'mean' scoring for evidence of vocational and practical skills in both the Pre-U and the A Level. The largest differences between the two qualifications were in literacy and language skills, where the Pre-U was considered to have greater evidence of these skills sets. This was also apparent for learning skills where, again, it was felt that this was more in existence in the Pre-U qualification than the A Level.

4B.10 Recommended allocation of UCAS Tariff Points

The Group used the grade alignment agreed by QCA (Pre-U D3/M1 boundary = GCE A Level A/B boundary; Pre-U P3 = A Level E/U boundary) as the starting point for recommending the allocation of UCAS Tariff points.

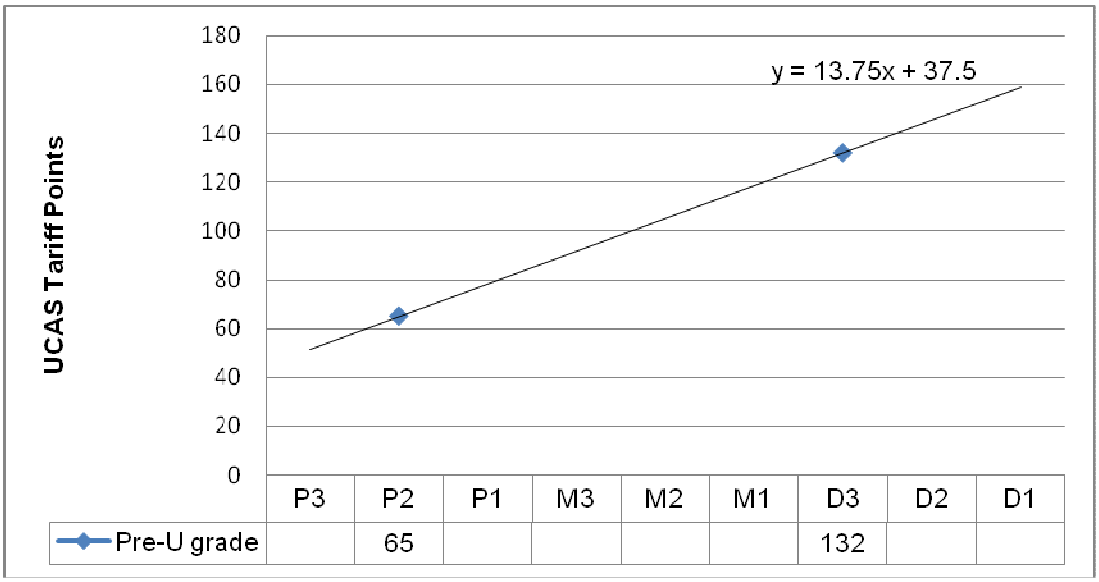
The HE representatives felt that it would be easier to compare lower-achieving candidate grades with each other and discussed whether a candidate at the bottom of grade E would be bettered prepared with the Pre-U qualification than an A Level candidate. The conclusion was that a Pre-U candidate would have more practical skills, know about the origin of life and have an ability to be able to summarise knowledge.

Taking this and earlier discussions into account, the HE representatives felt worked on the principle that poorer performing candidates on Pre-U would be almost 10 per cent 'better' than poorly performing A Level candidates. Given that a candidate achieving a D at A Level would attract 60 Tariff points, a Pre-U candidate achieving P2.should be given 65 UCAS Tariff points.

The Group assumed that an A Level grade A would be equivalent to D3 (subject to an extra 10 per cent utility) and then deduced the other grades by using a linear regression model (

Figure 8).

Figure 8: Pre-U Principal Subject Biology Tariff Points linear regression model



The linear regression equation thus produced (y=13.75x + 37.5) generated proposed Tariff scores which are illustrated in Table 41.

Table 41: Allocation of UCAS Tariff Points to Pre-U Principal Subject Biology

Pre-U Grade	Tariff Points
D1	159
D2	145
D3	132
M1	119
M2	105
M3	92
P1	78
P2	65
P3	52

4C ECONOMICS

4C.1 Prior to the meeting

Prior to this meeting some preliminary work was carried out. This included a detailed mapping of the Cambridge Pre-U Diploma Principal Subject Economics against the AQA Economics GCE A Level, reports from three HE representatives highlighting similarities and differences between the two qualifications and comparative studies from a representative from each Awarding Body. Pre-meeting papers were distributed, requiring members of the group to compare aims, content, study hours,

relative size and assessment models of the Cambridge Pre-U Diploma Principal Subject Economics and that of the AQA Economics GCE A Level.

4C.2 The Expert Group meeting

The Expert Group then met on one occasion for two days on 4 and 5 June 2008 to examine and discuss the evidence listed in Appendix 2 and the preparatory work completed by group members. This section contains an account of the deliberations of this meeting.

The opening session provided an opportunity for the University of Cambridge International Examinations (CIE) Chief Examiner and the AQA Chair of Examiners to present their qualifications and for Expert Group members to seek clarification about general issues in relation to the awards.

Table 42: Key features of each qualification – Economics

Pre-U Economics	**GCE A Level**
Three assessment components	Four units
Linearity	Modular approach
No interim assessments	Two assessed at AS Level with a further two at A2.
No unit resits	Unit resits possible
Assessments in June	Assessments in January and June
Longitudinal investigation	All units externally assessed – no graded coursework
Graded Pass, Merit and Distinction (with three levels in each – nine levels in total)	Graded A* - E
Centres able to plan own schemes of work	Centres have flexibility over the timing of assessments
Extended writing in assessments	

Pre-U Economics

The Pre-U is a new qualification, the initiative for which originally derived from teachers and schools as an alternative to GCE A Level. It is specifically designed to prepare for progression to HE and is intended to reflect a response to some of the issues concerning A Level raised by the Nuffield 14-19 Review. First teaching will start in September 2008 with first assessment in Summer 2010. The Expert Group therefore had no access to candidate evidence, and indeed there was currently no experience of delivery or assessment.

The key distinctive feature of the Pre-U Economics is linearity, with all assessment taking place at the end of two years of sixth form study (Years 12 and 13). Candidates take all three assessment components in the same session. This has the effect of freeing up the delivery of the Pre-U and giving more opportunity to centres and candidates to make use of the full two years without formal assessment at an interim stage, eg in the Summer term of the first year.

Linearity allows for the possibility of the whole of the assessment process by incorporating synopticity, and all parts of the syllabus are tested at the highest level, unlike the AS components of GCE A Level. A further benefit of linearity is the freeing up of more time for teaching rather than preparation for assessment, and this makes it possible to have slightly greater content than A Level.

There are no re-sit facilities other than re-taking all the assessments at the end of the following year.

The Pre-U has been designed to makes use of extended writing in the assessment process. It rewards the ability to plan and produce a lengthy, coherent answer, and uses open-ended questions which will reward candidates' ability to think laterally and display their knowledge from reading around the subject.

Another feature of the Pre-U is the Investigation (assessed as Paper 3) which encourages:

- Depth of knowledge
- Personal research skills
- Ability to construct an answer of considerable length to a question from a substantial bank of knowledge
- An enthusiasm for the subject

While the Investigation takes place over an extended period, it is assessed by an unseen examination. Candidates will be aware in advance of the topic but not the actual question.

The grading for the Pre-U is on a scale of Pass, Merit and Distinction, each of which is sub-divided into three, resulting in a nine-point scale from D1 to P3. It is the intention that D1and D2 should be above the GCE A Level A/B threshold, giving the opportunity for candidates to demonstrate higher levels of achievement and affording HE a tool for high level differentiation. P3 will be aligned to A Level Grade E and D3 to Grade A at A Level. Further note that grade D1 is a judgmental grade boundary that will be set in such a way as to ensure that the grade below, D2, has equivalence with the new A* at A Level

The GCE A Level used for benchmarking is a new modular four-unit qualification, first teaching for which will take place in September 2008. It was therefore not possible for the Expert Group to access candidate evidence at this stage. However the Chair of Examiners indicated that the content was closely based on the previous six-unit modular A Level which had in turn replaced a linear A Level with terminal examinations.

As with other GCE A Levels, Economics GCE A Level is structured into two halves, AS and A2. The AS is assessed at a level appropriate to one year of study – A2 builds on it and provides greater depth. Nevertheless, both components are rated as 50% in the overall assessment of GCE A Level. AS is a standalone qualification in its own right, whereas A2 has no independent existence and is simply a name for the second half of A Level. Economics GCE A Level is subject to the QCA code of practice applicable to all GCE qualifications.

The Economics GCE A Level consists of four units, two at AS and two at A2, all equally weighted. The modular approach brings with it considerable flexibility for centres and learners, not least over the timing of assessment. The AS units can be assessed in January or June of either year of A Level study, and it is open to centres to treat the GCE A Level as fully linear and take all assessments at the end of the course. The normal pattern is for AS assessments to be taken at the end of the first year of study (Summer of Year 12) but centres can opt not to certificate at that point. Candidates have the opportunity to re-sit either or both of their AS units in order to improve their grades – the best result will count. The current arrangements do not permit HEIs to receive information about re-sits and they are provided with information about the final outcome of the award irrespective of the route to that achievement.

The GCE A Level grading system uses a scale of A* - E. The A* grade is a new grade above grade A based solely on achievement in A2 units and will be awarded on a mathematical basis requiring candidates to achieve an average of 90% across their A2 units. It has been introduced to award excellence in achievement above grade A, and to provide a tool for differentiation for competitive courses in HE. It also reflects the Government's intention to provide additional "stretch and challenge" in GCE A Levels.

4C.3 Comparison of aims

Table 43: Comparison of aims – Economics qualifications

Pre-U	Economics GCE A Level
The aims of the Pre-U are to enable centres to devise courses that will provide candidates with the opportunity to: • Analyse and evaluate the economic concepts and theories that underpin the workings of a modern-day economy • Develop quantitative skills through the appreciation and use of various relevant statistics • Understand and apply the concepts of causality and interdependence, on both a macro and a micro scale • Critically and independently assess the effectiveness of policy decisions, both internal and external, that have influenced the UK economy over the past ten years as far as areas contained within the syllabus are concerned • Communicate their reasoning and conclusions fully and effectively	The stated aims of the Economics AS and A Level are to encourage candidates to: • Develop an interest in and enthusiasm for the study of the subject • Appreciate the contribution of economics to the understanding of the wider economic and social environment • Develop an understanding of the range of concepts and acquire an ability to use these concepts in a variety of different contexts • Use an enquiring and thoughtful approach to the study of economics and develop an ability to think as an economist • Develop skills, qualities and attitudes which will equip them for the challenges, opportunities and responsibilities of adult and working life

The Pre-U is designed specifically to prepare students with the subject-specific skills, and generic study and independent learning skills, which will prepare them for success in HE level study. This intention is reflected in its title.

The GCE A Level has mixed aims including progression to Economics degree courses in HE, broader progression to a wide range of HE courses, and progression to employment. In practice 90% of GCE A Level Economics candidates progress to HE.

The Expert Group considered that the aims of the two qualifications were broadly similar. The Pre-U was judged to have slightly more emphasis on study and independent learning skills, while the GCE A Level has more emphasis on the wider environment and preparation for adult and working life. Both provide strong utility for progression to HE, and both aim to engender enthusiasm for Economics and stimulate an enquiring, critical approach.

Strengths and weaknesses

The Expert Group debated the strengths and weaknesses of the qualifications at length, and it became clear that certain features could be seen as either a strength or a weakness. The main debate centred around linearity versus modularity, and the Expert Group returned to this theme throughout its discussions - summarised by the following table of comparative strengths and weaknesses:

Table 44: Strengths and weaknesses (linear vs. modular) – Economics

Pre-U (linear)	GCE A Level (modular)
Strengths	
• Greater freedom for delivery of two-year programme • More teaching time and therefore more scope for additional content • All assessment at full Pre-U standard • Potential for synopticity in all assessments	• Considerable flexibility in terms of assessment arrangements eg choice of timing of AS assessments, choice of whether or not to certificate AS • Stepped approach of AS and A2, the one building on the other • Formal feedback on progress through modular assessment • Evidence of AS achievement for HE at point of application • Less emphasis on criticality • Plenty of opportunity for candidates to re-sit • Synergy with learning style in many HEIs.
Weaknesses	
• More recall needed • Assessment more critical with higher risk for candidates • No equivalent of AS achievement evidence at point of application to HE • Greater freedom could lead to less structured approach - much depends on delivery • No opportunity to re-sit other than by taking the whole qualification again	• Greater complexity. • No guarantee to HE of receiving evidence of AS achievement in all cases. • HE not informed as whether re-sitting has taken place • AS units not at full GCE A Level standard, although they form 50% of GCE A Level assessment • Modular approach can result in learners and teachers treating learning in separate chunks • Synopticity in two units only (although some felt that there was in practice as much synopticity in GCE A Level as the Pre-U) • Less teaching time because of AS assessment in Summer term of first year

It was also noted that GCE A Level could be delivered and assessed as a linear qualification if desired, although this approach was only adopted by a small minority of centres and the papers are still modular.

Other strengths and weaknesses of the two qualifications were identified in Table 40.

Table 45: Other strengths and weaknesses – Economics

Pre-U	GCE A Level
Strengths	
• Investigation - additional depth, independent research, reflection and synthesis - good preparation for study in HE and a good tool for discrimination • Greater opportunity for extended writing in essay questions (75 minutes) • Potential for encouraging freedom in delivery • Reward for high levels of achievement eg D1, D2 • Greater opportunity for differentiation by HE • Good preparation for HE.	• Opportunity for extended writing in essay questions (45 minutes) showing reflection and synthesis. • Reward for higher level of achievement eg A*. • Greater opportunity for differentiation by HE. • Good preparation for HE and the real world. • Good opportunities for demonstrating analysis
Weaknesses	
• Investigation – concern about high risk for students and views that the unseen assessment is not the most appropriate method. Query over	• Does not contain investigation or coursework

utility for entry to four-year degree courses in Scotland. • Quality of Investigation partly dependent on quality of teachers. • Mixed opinions about the benefits of greater extended writing opportunities for candidates below Distinction level (the opportunity to hang themselves). • Many benefits rely upon high quality delivery by centres.	

At this interim stage it appeared that overall the Pre-U might have a slight advantage over GCE A Level in terms of utility for progression to HE, but the HE representatives had differing views of the merits of the Pre-U Investigation and saw both benefits and disadvantages in linearity.

4C.4 Determining size

4C.4.1 Comparison of guided learning hours

The comparison of Guided Learning Hours (GLH) was assisted by the work undertaken by QCA when accrediting the Pre-U. QCA had determined a GLH of 360 hours for the OCR A Level and had mapped the Pre-U against it. It was QCA's judgement that the Pre-U had 20 additional GLH giving a total of 380 GLH. This would suggest that the Pre-U was 5% larger than the GCE A Level.

It was, however, noted that historically A Levels had not been allocated a fixed GLH, and that there could be variation from one awarding body to another. The OCR Economics A Level against which QCA had mapped the Pre-U differed from the AQA qualification. However, QCA now accords all A Level specifications 360 GLH. It was suggested that in delivery there might in practice be little difference, although it was pointed out that the linear assessment of the Pre-U allowed for greater teaching time.

4C.4.2 Breadth and depth of content coverage

The Examiners had undertaken detailed mapping of content in advance. This revealed that the vast majority of the content was in common across both the Pre-U and the GCE A Level, and the CIE Chief Examiner had identified 129 topics common to both qualifications. There are six topics as follows which were included in the A Level but not in the Pre-U, whereas 15 topics included in the Pre-U were not in GCE A Level.

Table 46: Comparison of content coverage - Economics

Present in Pre-U only	Present in GCE A Level only
• Marginal utility • Indifference curves • Income and substitution effects • Monopolistic competition	• Positive and normative judgements • Growth of firms • Fisher's equation of exchange • Notions of equity

• Discounting and shadow pricing • Law of unintended consequences • Alternative measures of standard of living • Simple numerical calculations of Lorenz curves and Gini coefficients • The numerical treatment of discounting and shadow pricing • Money multiplier • Monetary transmission mechanism • Degrees of development • Sustainable development • Government development policy • State planning and development •	• Labour immobility • City of London in trade
Total number of topics = 15	Total number of topics = 6

It should be noted that, although the Pre-U incorporates some additional material as full topics, this does not imply that they are all excluded from GCE A Levels.

The most significant area of difference was Development Economics which was a feature of the Pre-U. A simplistic calculation based on comparisons of content suggested a 6-7% additional content for the Pre-U, but this did not take depth into account. It was generally thought that the depth was comparable, although there might be greater depth of theoretical knowledge in some areas of the Pre-U eg in the areas of demand analysis.

While acknowledging slightly greater content, HE representatives did not feel that this would necessarily affect the utility for progression to HE. Additional content at the same level would not make a significant difference. While the Investigation would provide evidence about the student, it was felt that it did not in itself provide extra content or size.

4C.5 Estimating relative demand - comparing assessment models

This task required the group to focus on estimating the relative demand of the two qualifications by comparing examination requirements such as structure, question papers, and mark schemes, as well as comparing the assessment models. Again, HE representatives' comments were sought on the comparative utility between the two models for progression to HE. Table 47 outlines the assessment models:

Table 47: Comparisons between assessment models – Economics

Question type		Pre U	GCE A Level
		tests all the syllabus at once	tests the syllabus four times, four different topics

		any	any	Transport and Environment, China and the Global Economy, Expansion of the EU, the Pensions Crisis	Markets and Market Failure	National Economy	Business Economics and the Distribution of Income	National and International Economy
	Paper Name	Paper 1	Paper 2	Paper 3	AS1	AS2	A2-3	A2-4
	Marks awarded	80 marks	75 marks	40 marks	75 marks	75 marks	80 marks	80 marks
	weighting	40%	40%	20%	25%	25%	25%	25%
	Time	135 minutes	135 minutes	75 minutes	75 minutes	75 minutes	120 minutes	120 minutes
Multiple choice questions	number	30 questions	n.a.	n.a.	25 questions	25 questions	n.a	n.a.
	candidate	answers all questions			answers all questions	answers all questions		
	marks	30 marks - 15 %			25 marks - 8.33%	25 marks - 8.33%		
Short answers	number	4 questions	n.a.	n.a.	n.a.	n.a.	n.a	n.a.
	candidate	answers all questions						
	marks	20 marks - 10%						
Data response	information	if short answers are predominantly macroeconomic in theme, then data response section is predominantly microeconomic in theme					one question always relates to the global context, one question always relates to the European Union context	one question always relates to the global context, one question always relates to the European Union context
	number	one question	n.a.	n.a.	two questions	two questions	two questions	two questions
	candidate	answers the question			answers one question	answers one question	answers one question	answers one question
	marks	30 marks - 15%			50 marks - 16.67%	50 marks - 16.67%	40 marks - 12.5%	40 marks - 12.5%

Essays	number	n.a.	6 essays: 3 predominantly macroeconomic in theme, 3 predominantly microeconomic in theme	n.a.	n.a	n.a.	3 essays	3 essays
	candidate		writes 3 essays but there should be at least one in micro and one in macro				writes one essay	writes one essay
	marks		25 marks per essay - 13.33% / total 40%				40 marks - 12.5%	40 marks - 12.5%
Long essay	information			four pre-set topics				
	number	n.a.	n.a.	four essays	n.a.	n.a.	n.a.	n.a.
	candidate			writes one essay				
	marks			40 marks - 20%				

The GCE A Level assessment totals 390 minutes compared with 345 minutes for the Pre-U. However, 150 minutes of the GCE A Level assessment is at AS ie not at full GCE A Level standard. The main distinguishing features of the assessment of the two qualifications are:

- The Investigation in the Pre-U – an in–depth piece of personal research, but assessed by an unseen examination
- More extended writing opportunities in Pre-U essay questions
- More opportunity for data analysis and application in the GCE A Level papers as more of the questions are data response.

Assessment Objectives

As represented in Table 43, the Assessment Objectives (AOs) for the two qualifications appeared very similar:

Table 48: Assessment Objectives – Economics

Pre-U	GCE A Level

Assessment Objectives		Weight	Assessment Objectives		Weight
AO1	Demonstrate knowledge and understanding	23%	AO1	Demonstrate knowledge and understanding of the specified content	28%
AO2	Apply theoretical knowledge and understanding to real life situations presented to them	23%	AO2	Apply knowledge and understanding of the specified content to problems and issues arising from both familiar and unfamiliar situations	28%
AO3	Analyse economic problems and issues and have a good knowledge of statistical methods used within the discipline	27%	AO3	Analyse economic problems and issues	24%
AO4	Evaluate and reach well-informed and considered conclusions. Candidates must be able to make a critical assessment of the relevance and appropriateness of assumptions made within models	27%	AO4	AO4 Evaluate economic arguments and evidence, making informed judgements	20%

The Expert Group considered that no distinction could be made between the qualifications on the basis of assessment objectives. Overall the weightings suggested a slightly greater emphasis on analysis and evaluation in the Pre-U and a slightly greater weighting on knowledge and understanding and its application in GCE A Level. The greater weighting of AO1 and AO2 in the GCE A Level reveals the influence of AS while the greater weighting of AO3 and AO4 in the Pre-U makes it more akin to the assessment weighting for the A2 units.

Synoptic assessment

The linear model of the Pre-U gives opportunity for synoptic assessment in all the papers. Synoptic assessment features in both A2 papers in GCE A Level, but not in the AS papers. However, the HE representatives debated the extent and significance of this difference, and concluded both qualifications offered sufficient synopticity for the purpose of ensuring, for progression to HE, a grasp of the syllabus as a whole.

Grade descriptors

The Expert Group did not proceed to discuss the grade descriptors in any depth as it was informed by the independent consultant that work on aligning grades between the Pre-U and A Level had been undertaken by QCA and in the absence of candidate evidence had to be taken as a given for the process.

4C.6 Estimating relative demand – comparing assessment requirements

Table 49: Assessment requirements - Economics

Question type	Pre-U	GCE A Level
Multiple choice questions (Pre-U)/ Compulsory objective test items (GCE A Level)	15%	17%
Short answers	10%	0%
Data response	15%	58%
Essays	40%	25%

Investigation paper	20%	0%

There were differences between the qualifications in respect of the use of structured or unstructured essays and responses. The GCE A Level has a large element of data response questions, and both these and the structured essays were thought by the HE members to provide more “scaffolding” for the candidate to build on. This is reflected in both stimulus material and the nature of the questions. By contrast the Pre-U Paper 3 is a single unstructured essay for which 75 minutes are allowed, and the Paper 2 essays are unstructured in the same sense (but candidates have an average of 45 minutes for each).

The HE members of the Expert Group debated at length the merits of the two approaches, and found strengths in both approaches. The unstructured Pre-U approach might enable good candidates to demonstrate a high level of analysis, but it had dangers for the weaker candidate and was felt to be high risk. HE economists were not looking for creativity and risk taking at the expense of evidence of the development of analytical and evaluative skills. The structured approach had merit for progression to HE, giving confidence in its utility as an indicator of achievement against the assessment objectives, and reflecting practices within some HE courses.

For the Pre-U essay-based questions, there is a split between theory and analysis with four levels and Evaluation with three levels. The marks vary between papers - Paper 2 is marked out of 25 and the investigation out of 40.

Apart from multiple choice and short answer questions, the marking instructions for the GCE A Level distinguish between issue-based questions and level-based questions, using a scale from Level 1 - 0-6 marks (Very weak) - through to Level 5 - 22-25 marks (Good analysis and evaluation).

There is clear guidance to Pre-U examiners to reward “signs of real insight and/or originality, not normally expected to be seen at this level”, although it was stated by the AQA Chair of Examiners that this would happen in practice with GCE A Level.

In general, Papers 1 and 2 of the Pre-U were thought to place similar demands on candidates as the A Level Papers 3 and 4. It was noted that in the Pre-U multiple choice is used to discriminate across the full range of grades at the end of a linear course, whereas in GCE A Level multiple choice is only used in AS.

The Pre-U Paper 3 has no equivalent in GCE A Level, and makes very distinct demands. The Expert Group had mixed views about the use of a 75-minute single unstructured essay, and awaited with interest evidence of how candidates will respond in practice. The view was expressed that this was not the best form of

assessment for the purpose, and it was more likely that candidates would "think outside the box" through data response questions where a novel scenario could be presented. However, the Group was informed of the tendency for even good GCE A Level candidates to answer such questions with pre-rehearsed template answers on the general theme. The Pre-U Paper might be more demanding than any of the GCE A Level papers, but there were differing views about its suitability and therefore its utility for progression to HE.

In assessing the relative assessment demand of the Pre-U and GCE A Level, the Expert Group re-visited its discussions on the merits of linearity versus modularity. All the assessment of the Pre-U is at the end of the course and therefore all questions can require the level of knowledge and skills expected by the end of the course. Linear assessment makes greater demands on candidates in terms of recall, but has greater risks because of the critical nature of end-of-course assessment without the opportunity to re-sit within the two years of study. A larger proportion of the Pre-U assessment is based on extended writing, which is less structured than in GCE A Level which provides more "scaffolding" and relies more on data response and structured essays. The HE members did not think that this necessarily meant that A Level was "easier" than the Pre-U – the assessment demands were different rather than more or less demanding, and the benefits of linear assessment for the good Pre-U candidate might prove demanding for weaker candidates.

4C.7 Estimating relative demand - comparison of candidate work

Because both qualifications are new and first teaching has not yet taken place, there was no candidate evidence available. In the circumstances the Expert Group concluded that its recommendations must inevitably be provisional and that it would be necessary to review them as soon as sufficient candidate evidence becomes available.

4C.8 Aligning the grades

The Expert Group was informed that grade alignments between the Pre-U and GCE A Level had already been determined by QCA. Fixed points of alignment were as follows:

- A Level A/B boundary aligned with D3/M1 boundary in Pre-U
- A Level E/U boundary aligned with P3 in Pre-U

It is understood that these alignments are based on the use of archived GCE A Level scripts, and can be relied upon to be assured by QCA. The Expert Group therefore took these alignments as a given.

4C.9 Domain scoring

The Expert Group members had undertaken initial work on scoring both qualifications against the domains. The Expert Group proceeded to work through the domain scores in the meeting. This process caused some concern, as the Expert Group adhered strictly to the principle that scoring should be based solely on what is assessed and/or what is explicitly referred to in the documentation under consideration. In some cases eg IT skills there was no specific assessment and no evidence that the qualification required or developed such skills. Following the strict criteria this resulted in a very low score, although all concerned were clear that IT skills would in practice be used in delivery in all cases. The concern was that the domain scoring charts for Economics might suggest that the subject had lower utility for progression to HE than was actually the case, and members asked for this concern to be recorded. It was important that all Expert Groups should follow the same methodology so that domain scoring charts are directly comparable.

While they felt able to make qualitative judgments about the qualifications, the HE representatives felt uneasy about making quantitative judgments of the kind which would sustain the averaging. In giving high scores to certain domains they did not necessarily imply a high degree of utility for progression to HE. Some domains were felt to be more relevant than others and could not be regarded as equal. Therefore, even if there was a significant difference between the scores given to the qualifications, this does not necessarily mean that one is favoured over the other for purposes of progression to HE.

The Group also considered the issue of the validity of judgments on the utility of a qualification based on what is assessed by the qualification as opposed to what the typical student would experience in delivery of the qualification and would offer for entry to HE in terms of skills and experience. Clearly delivery could not be taken into account in the Expert Group's judgments, and in any case there was currently no delivery experience for either qualification.

These issues applied equally to both qualifications, and the process of domain scoring did not reveal any major differences between the qualifications.

Figure 9: Tariff domain scores – Pre-U Economics

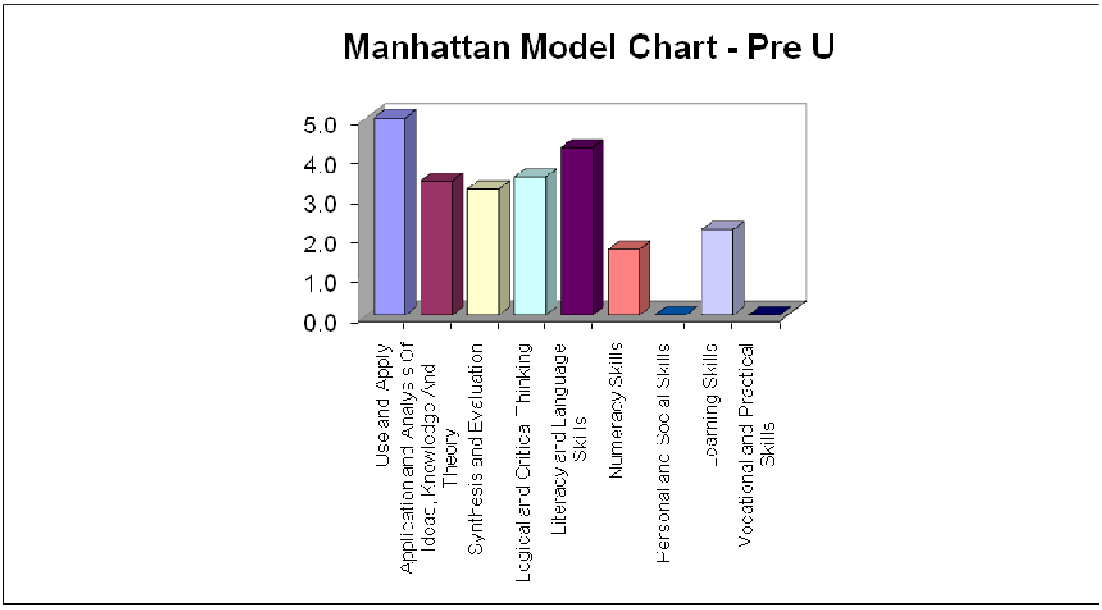
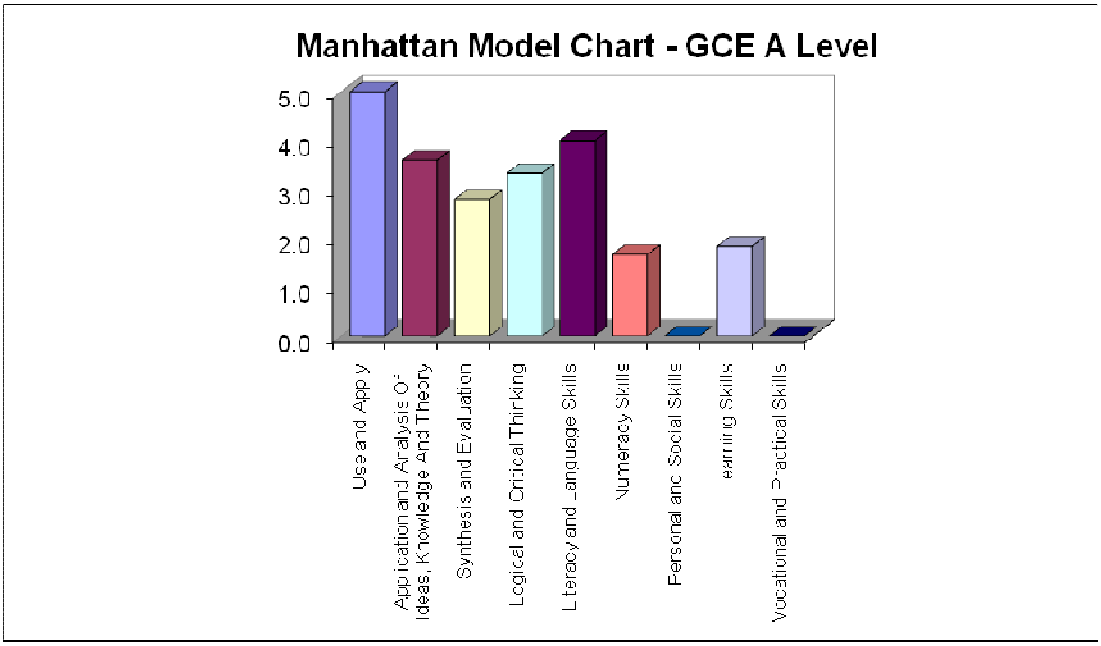

Manhattan Model Chart - Pre U
5.0
4.0
3.0
2.0
1.0
0.0
Use and Apply Application and Analysis Of Ideas, Knowledge And Theory
Synthesis and Evaluation
Logical and Critical Thinking
Literacy and Language Skills
Numeracy Skills
Personal and Social Skills
Learning Skills
Vocational and Practical Skills

Figure 10: Tariff domain scores – Economics GCE A Level



As can be seen from the above graphs, and Table 43 (below), both scored the maximum of 5.0 for Section 1: Use and Apply. Also strong was Section 5: Literacy and Language Skills (Pre-U - 4.3; A Level – 4.0). A Level scored higher than the Pre-U for Section 2: Application and Analysis of Ideas, Knowledge and Theory - 3.6 compared with 3.4, but the Pre-U scored higher than A Level in Section 3: Synthesis and Evaluation - 3.2 compared with 2.8, Section 4: Logical and Critical Thinking – 3.5 compared with 3.3, and Section 8: Learning Skills – 2.2 compared with 1.8. However, none of these differences was felt to be greatly significant.

Table 50: Comparative Tariff domain scores - Economics

Domain scores	**Pre-U**	**GCE A Level**
Use and apply	5.0	5.0
Application and analysis of ideas, knowledge and theory	3.4	3.6
Synthesis and evaluation	3.2	2.8
Logical and critical thinking	3.5	3.3
Literacy and language skills	4.3	4.0
Numeracy skills	1.7	1.7
Personal and social skills	0.0	0.0
Learning skills	2.2	1.8
Vocational and practical skills	n/a	n/a

Both scored low for Section 6: Numeracy Skills (1.7 in each case), although this was a reflection of what is formally assessed and does not reflect the skills of a typical Economics student. The Expert Group considered that it was not the function of Economics qualifications to provide assessed Personal and Social Skills (Section 7)

as defined in the domain and therefore this was zero-rated for both qualifications. This should not be taken to indicate that Economics students do not possess personal and social skills. Finally the Expert Group did not consider that Section 9 (Vocational and Practical Skills) was relevant to academic qualifications and therefore omitted this section.

The totals of the mean scores, out of a possible total of 40 (eight domains each with a maximum score of five), were as follows:

Pre-U - 23.3 GCE A Level – 22.2

This gave a 5% advantage to the Pre-U, but the Expert Group was uneasy about acting on this difference in view of its concerns about the domain scoring process, the accuracy of the averaging involved in arriving at mean scores, and the impression from the detailed work that both qualifications were similar in their utility for progression to HE.

4C.10 Recommended allocation of UCAS Tariff Points

The starting point for the recommendation of the allocation of UCAS Tariff points was the grade alignment agreed by QCA of the Pre-U D3/M1 boundary against the A/B boundary for GCE A Level and the Pre-U P3 against the E/U boundary in GCE A Level. Given the existing Tariff scores for GCE A Level, this gave a scale for the Pre-U with 120 points for D3 and 40 points for P3. Using a simple arithmetical allocation the following scale was used as a volume-free starting point:

D1	146
D2	133
D3	120
M1	106
M2	93
M3	80
P1	66
P2	53
P3	40

The Expert Group then proceeded to consider whether a multiplier should be applied to the basic scores of 120 for D3 and 40 for P3. The HE members reviewed a series of factors which might influence the determination of such a multiplier eg size, content, assessment demand and domain scoring. For part of this activity the HE members met separately to weigh the evidence and arrive at agreed recommendations.

In terms of Guided Learning Hours, the Pre-U was 6% larger ie 380 GLH compared with 360 GLH for the GCE A Level. This was acknowledged, but the HE representatives did not feel 20 similar additional hours were of additional value for progression to HE and that size was not necessarily an indicator of utility for progression to HE. They therefore did not feel that the slight difference in GLH warranted an adjustment in Tariff points.

It was noted that there was an approximately 6% greater content in the Pre-U, but the HE representatives were not convinced that the additional content was of any significant extra utility for progression to HE. The most significant difference between the Pre-U and the GCE A Level was the Investigation, but this did not represent additional taught content as such. It was therefore thought that there was insufficient justification for a multiplier in terms of content.

The assessment demand posed greater difficulties as it raised issues of structured v unstructured questions, linearity v modularity and the importance of synopticity. These were not easy matters to determine as it was a matter of what value should be given to different approaches.

The Pre-U essays were more open-ended than the more structured approach in GCE A Level. Both approaches had merits. The Pre-U had more demanding questions for able candidates but this could be a disadvantage for weaker candidates. The debate was as to whether this gave greater utility for progression to HE. The HE representatives valued analytical skills highly and were unsure that the Pre-U provided any greater opportunity for evidencing higher level analytical skills than GCE A Level. It was acknowledged that the Investigation paper of the Pre-U gives the opportunity for broader analysis, but the real issue was whether that was what HE wanted. They were concerned about the use of an unseen 75 minute examination to assess the Investigation. They felt that it had great potential, but wanted to see how it would work in practice.

The data response questions in GCE A Level were a strength from the point of view of progression to HE, and there was felt to be a useful synergy between A2 assessment in A Level and assessment on HE courses in Economics.

It was difficult to compare the Pre-U assessment with GCE A Level because of the different structure. The AS/A2 cumulative structure based on a modular approach gives the learner plenty of opportunity to re-take units. As the best sitting counts, this is a low risk activity although re-sitting could impair A2 performance. The flexibility of the AS/A2 structure permits candidates to take AS assessment at the end of two years at which point it would be relatively easier. There was thought to be little clarity for HE as to how the final outcome of GCE A Level has been achieved. However,

there was little evidence of re-sitting inflating a candidate's attainment to any significant degree, and these factors did not affect the HE representatives' judgment on the value of GCE A Level for progression to HE.

The Pre-U assessment is based on terminal assessment on a "one shot" basis. Greater recall is needed, and in theory such assessment is more demanding, although it was suggested that candidates could be advantaged by having two years of experience. Linear assessment was seen to be a potential strength, but HE representatives were doubtful that it should be rewarded over the modular approach.

The HE representatives also reviewed the question of synopticity, and questioned whether the linear approach of the Pre-U actually delivered more synopticity than the A2 units of GCE A Level. The verdict was inconclusive, but it was thought that both qualifications embodied a synoptic approach.

It was noted that AS assessment was at a lower level than A2 and the Pre-U, reflecting the one-year nature of the AS. However, although 50% of the GCE A Level assessment is at AS standard, the HE representatives did not feel that this should be taken to account as the outcome of both qualifications is the product of two full years of study.

The HE representatives felt that they had insufficient basis on which to reward achievement in the Pre-U more highly than GCE A Level, and noted that in any case the stretch in the Pre-U is reflected by the extended grading scale with grades D1 and D2 which offers good candidates the opportunity of achieving a points score in excess of that for grade A in GCE A Level. At the time of the meeting there was no information about the likely points score for A* so it was not possible to benchmark D1and D2 against it at this stage.

The remaining factor was the scoring against domains. The totalled mean scores revealed an advantage for the Pre-U (23.3) over GCE A Level (22.2) of under 5%, but the Expert Group felt uneasy about the domain scores and their significance as indicated above, and the HE representatives did not have sufficient confidence in the process to wish to adjust the Tariff scores on the basis of it.

While acknowledging that there were differences in size and content of around 5-6%, and respecting QCA's judgments, the HE representatives nevertheless considered that in terms of utility for progression to HE, there were no significant grounds to give the Pre-U a different weighting to GCE A Level, and therefore recommended that:

- No multiplier should be introduced

- The Tariff points score should be awarded on the basis of D3 = 120 points and P3 = 40 points
- There should be a mathematical allocation of points to the other grades as in the table above.

While differing opinions had emerged during earlier discussions, the HE representatives were unanimous in making this recommendation following extended discussion.

It was further recommended that this recommendation should be reviewed as soon as sufficient candidate evidence becomes available, with a particular view to seeking evidence of clear signs of distinction in terms of analysis eg in the Investigation.

4D FRENCH

4D.1 Prior to the meeting

Prior to this meeting some preliminary work was carried out. Pre-meeting papers were distributed, requiring members of the group to compare aims, content, study hours, relative size and assessment models of the CIE Pre-U Principal Subject and Short Course in French in comparison with the OCR GCE A Level French, and aligning the grading systems. In addition, group members were asked to undertake a preliminary scoring of the qualifications against the UCAS Tariff domains.

4D.2 The Expert Group meeting

The Expert Group then met on one occasion for two days on 4 and 5 June 2008 to examine and discuss the evidence listed in Appendix 2 and the preparatory work completed by group members. This section contains an account of the deliberations of this meeting.

The opening session provided an opportunity for the CIE Chief Examiner and the OCR Chair of Examiners to present their qualifications and for Expert Group members to seek clarification about general issues in relation to the awards. Of particular relevance for the subsequent proceedings was the explanation that all three qualifications under consideration would be taught for the first time from September 2008; therefore no candidate evidence would be available.

In respect of the Pre-U Principal Subject, it was pointed out that this qualification had been designed specifically for entry to HE focusing on the skills of analysis, synthesis and essay writing. It provided for both the development of knowledge of contemporary France and an element of enrichment on the basis that understanding French required a grasp of culture – literature, cinema etc. A unique feature of the

Principal Subject was a component which would not be formally assessed: a portfolio of relevant material from the internet, television, radio, and newspapers, collected over the two years of study in order to provide background for presentations and written work logged as part of the course. It had a linear structure, stretch and challenge, and a discursive breadth and depth in order to provide coherence, and an introduction to the subtleties of French. These together with the critical tools already mentioned (analysis, synthesis and essay writing) were of benefit to the learner. One of the aims of the Pre-U is to encourage students to develop an authentic feel for the language, fostered by extensive use of authentic materials.

It was explained that the Principal Subject is reported across nine grades – Pass (P1, P2, P3), Merit (M1, M2, M3) and Distinction (D1, D2, D3). It was agreed, in the absence of alternative evidence at this point in time, that P3 should be aligned to the A Level Grades E/U boundary, and D3 to the A Level Grades A/B boundary in line with the judgement made by QCA as part of its accreditation process.

The Short Course (only available in the Pre-U for languages study) was described as a stand-alone qualification with the same aims and objectives as the Principal Subject but which were not applied to the same depth. It had four elements for assessment: reading, writing, speaking, and listening. At this point, the group was encouraged to think of the Short Course more in terms of an AS than a full A Level.

The presentation on the A Level explained that the specification adhered to specified aims from QCA which had an emphasis on language learning and usage, ie competence in understanding, accuracy and effective use of skills, rather than on culture and literature. Notwithstanding the emphasis on usage, it was pointed out that study of French necessarily involved study of Francophone culture and that cultural topics, such as film and literature, could be studied, although they were not separately assessed. Group members were informed that coursework did not form part of this new specification, and the assessment burden had been reduced in comparison with the current A Level from six to four assessments. The latter would in turn reduce the opportunity for re-sitting units, something which HE had criticised. Last, a new grade had been introduced, the A*, available to candidates who had already achieved Grade A and who then further showed excellent performance in the A2 units which would be over and above that of the current A grade.

Design

The comparative process undertaken by the group started with consideration of the principal features of the respective qualifications. The following emerged from discussion:

Table 51: French qualifications design

Pre-U Principal Subject	GCE A Level
Linear, with assessment at end of course	Unitised, with four units and four assessment points; re-sits possible
Two-year course	Two-year course, with 'dropping-off' point, ie AS after one year
Component of overall Pre-U Diploma or stand-alone qualification	Stand-alone qualification
Nine grades, D1-P3, on basis of whole qualification	Six grades, A*-E, on basis of aggregation of unit UMS scores
Compensatory[7]	
Progressive/synoptic[8]	
Short Course	
Linear	
Taught separately or integrated into Principal Subject group	
Stand-alone qualification only	
Graded D1-P3	

At the end of this initial task, there was some discussion about the respective potential advantages and disadvantages of linear versus unitised assessment. One member of the group thought that not examining until the end of the course allowed for greater freedom which perhaps would be intellectually permissive. On the other hand, more assessment points could impose pressure on students. The point about intellectual permissiveness was not accepted by all but it was agreed that the Pre-U had less emphasis on achievement of grades throughout, and that one approach to assessment was not necessarily better or worse than the other, rather each had its pros and cons. This discussion was important in the context of later debate about assessment demand.

Overall it was agreed that the Principal Subject and the A Level were functionally the same, but qualitatively distinct. At this stage in the proceedings, it was considered that the Short Course looked like an AS, but like the Principal Subject, had distinctive features.

4D.3 Comparison of aims

The presentations which started the process of comparison, together with consideration of the features of the qualifications in question, had already provided a lot of helpful information about similarities and differences in aims and purposes of the Pre-U Principal Subject in comparison with the A Level. It was therefore possible to agree straight away that the aims were similar in range and scope, and that the demands in terms of linguistic competence were broadly the same. With this as a

[7] A candidate does not have to perform well (or even pass) all parts of the examination. The overall end grade for both Pre-U and A Level is an accumulation of weighted marks for all compulsory components which is then used to determine the grade outcome.

[8] The qualification is structured so that learning undertaken at the beginning of a course of study forms the building blocks for subsequent learning. Assessment draws on all learning and requires a candidate to make connections between components which may have been learned as discrete entities. However, the Pre-U differs from the A Level insofar as all the assessment is done at the equivalent of A2 of the A Level.

starting point, more detailed analysis was undertaken by the group of the exact differences, and, importantly, what this would mean in terms of preparation for progression to HE. The following resulted from this discussion:

Table 52: Aims and purposes of French qualifications

Pre U Principal Subject	GCE A Level
• Greater emphasis on personal and social skills • Emphasis on culture and civilisation (specific) • Greater emphasis on critical thinking • More requirement for longer essay writing and structured argument • Requirement to study literature • Essays more wide-ranging and longer • Analysis of sustained media • No use of transactional language • Oral assessment, but less	• Little focus on personal and social skills • Inclusion of culture and civilisation (implicit) • Less emphasis on critical thinking • Discursive tasks with same sort of language and structured argument, but less requirement • Study of literature not required, but optional • Essays rooted in specific areas and shorter • Analysis and evaluation of shorter texts • Transactional language for interpreting purposes • Quantitatively greater amount of oral assessment

As a result, all members of the group agreed that although the demands on linguistic competence were the same across the two qualifications, the requirement for the study of culture and civilisation was a whole extra dimension in the Pre-U. This point, which had already been raised in consideration of the design of the qualifications, proved to be the area which distinguished the Pre-U from the A Level throughout subsequent discussions.

In terms of respective strengths and weaknesses, there was complete agreement across the HE representatives that the requirement in the Pre-U, where essays were designed to be more wide-ranging and go across boundaries, was distinctively better preparation than the A Level for progression into their courses. This was not to say that essays were not included in the A Level, but that they aligned more closely to the general essays in the Principal Subject. This quantitative difference meant that Pre-U students had more opportunities to organise language in a discursive mode. It was also not to say that the A Level did not require analysis, but the difference was between discussion and analysis of a short article (subsequently related to the student's own views on the topic), as opposed to the likelihood in the Pre-U of having to provide commentary on authors such as Molière, Balzac or Voltaire. This was conceived by the HE representatives as provision of more stretch and challenge and development of deeper understanding in the Pre-U. On the other hand, it was acknowledged that the A Level assessed the use of transactional language which was not covered in the Principal Subject, and had two-thirds more oral assessment.

When asked specifically if the aims and purposes of the two qualifications were commensurate in terms of preparation for HE, all HE representatives agreed that this had to be the case, but that the study of literature in the Pre-U was a welcome inclusion.

After the above debate, the following was agreed as capturing the essential difference between the Principal Subject and the A Level:

Both qualifications were suitable for entry into HE, but the Pre-U looked more specifically-tailored to prepare students for progression to HE.

Discussion then turned to the Short Course. It was agreed that the aims and purposes of this, in comparison to the AS component of A Level, meant that the two could be perceived as being the same. In terms of progression to HE, generally the Short Course would not be appropriate for entry into French, although there could be exceptions for mature students. Overall the Short Course had not been designed for progression to HE, but, nonetheless, both it and the AS, would be helpful when taken in conjunction with another language for entry to language courses, and would be welcomed as a fourth subject for entry to non-language degrees.

4D.4 Determining size

4D.4.1 Comparison of guided learning hours

Consideration of size of the respective qualifications first looked at Guided Learning Hours (GLH). These were specified as 380 for the Principal Subject, 360 for the A Level, and 180 for the Short Course (all qualifications had been accredited with these values by QCA). At first glance, therefore, it appeared that the Principal Subject was a little larger (just under 5%) than the A Level, and that the Short Course was half the size of the A Level. However, it was recognised that GLH alone were not sufficient in order to measure size accurately, and attention moved immediately to consideration of content.

4D.4.2 Breadth and depth of content coverage

It had already been identified that language subjects cover more in the way of skills than explicit content (in comparison with, say, Geography). Notwithstanding this, it was possible for the group to debate content in the form of language and other skills. This was based on two categories, one, language topics, grammar, and skills, and, two, the additional study in the Pre-U of literary texts and cultural topics. Table 48 provides an overview of the outcomes of the discussion on the former:

Table 53: Content of French qualifications

Pre U Principal Subject	GCE A Level
Language topics (similar for both qualifications)[9]:	

[9] Both qualifications were organised into topics which confirmed what needed to be covered. The Pre-U grouped these into main categories, whereas the A Level listed them as individual topic areas. The latter aligned with the sub-topic areas of the Pre-U. Although the topics were broadly the same for each qualification, the approach was different: for the A Level, material was provided by the teacher and all topics were covered; for Pre-U the student

Fewer topic areas (all of which are covered) but 133 suggested sub-topic areas (not all of which are covered, and which the student has to research)	122 sub-topic areas (all of which are covered, with material provided by the teacher)
Grammar: Essentially the same but with occasional differences between receptives and productives and accuracy required[10].	
Skills (range generally the same): Further emphasis on accuracy, argument, and critical analysis - through the requirement to undertake more and longer essays	Inclusion of transactional oral skills

It was made clear that the language sub-topics should not be seen as being analogous to a content-based syllabus, rather that they were the lexical 'coat hangers' on which to hang skills. Therefore, it was not wholly appropriate to consider the A Level as being larger just because there was a requirement to cover more language skills, and, in any event, there was a difference in the way that students accessed the materials involved. It was also pointed out that the lack of a specific requirement in the Principal Subject to study all sub-topics may leave more time for study of the literary texts. On the other hand, it was accepted that the A Level students would need to spend more time on revision and assessment. The differences between the emphasis in the Principal Subject on argument and the inclusion of transactional oral skills in the A Level were again highlighted.

Moving on to grammar, the group agreed that there was little to distinguish one qualification from the other.

However, in terms of skills, it was considered that there was a difference between the two qualifications. This was mainly because of the requirement in the Pre-U to study cultural topics and literary texts. Again, it was pointed out that the A Level could include study of texts, but these were more likely to be in the form of, for example, articles on current affairs, as opposed to historical texts. On the other hand, for the A Level there was at least an equal probability that the study would instead centre on film, media, or other themes which would be more likely to be contemporary than historical. Nonetheless, it was thought that the requirement within the Principal Subject to work on cultural topics and literary texts (with the requirement to also study these in more than one medium), which in the A Level was not a requirement, added to the size of the qualification. (The later section on assessment, which even at this stage in the analysis could not be ignored, confirmed that Paper 4 of the Pre-U tested a distinctive and additional requirement).

4D.4.3 Conclusions on size

Following the discussion on content, the group was taken back to the initial consideration of GLH and reminded of the difference of around 5% between those for

needed to undertake the research independently from the teacher, but did not need to cover all the topics. Thus the Pre-U provided more freedom for the student to explore within that lexical framework.

[10] These were considered to balance each other out.

the Principal Subject and those for the A Level. Each member of the group was then asked to make a first judgement about size in terms of content:

HE representative 1 The Principal Subject was 10% bigger based on the amount of essay writing and range of cultural and literary topics and texts studies.

HE representative 2 The Principal Subject was 15% bigger based on the requirement to study three additional literary texts, 5% per text.

HE representative 3 The Principal Subject was 20% bigger because of both the additional GLH and the requirement to read texts and write longer essays.

Pre-U Chief Examiner The Pre-U was 15% bigger on the basis of inclusion of the cultural and literary texts together with the requirement for longer essays.

A Level Chief Examiner Agreed the 'corpus' of the Pre-U was bigger, and that there was a requirement in the Pre-U to study literary texts as opposed to the possibility of study of additional texts in the A Level. At this stage he identified a possible trade off between the additional essay writing in the Pre-U and the additional coverage of language topics in the A Level.

It was pointed out that the Principal Subject had originally been designed with 400 GLH in mind but that on accreditation GLH had been reduced to 380 without any removal of 'content'. The group was instructed that this information was not included in the syllabus so should not influence the size conclusion.

On revisiting the first consideration of size on the basis of additional skills and content, the second HE representative revised his assessment to the Pre-U being 20% larger than the A Level on the basis of an additional 5% for the longer essay writing requirement. Overall this resulted in a range for size from a tentative 0% to a strong feeling on the part of two HE representatives that there was 20% additional material in the Pre-U. At this point the size deliberations were parked pending assessment of demand.

4D.4.4 Short Course

It was then necessary to consider the size position of the Short Course. This required practically no additional debate because all group members agreed that it was so similar to AS that it could not be anything other than 50% of the A Level in size. In respect of the relationship between the Short Course and the Principal Subject, the situation indicated by the GLH was confirmed, ie the Short Course was less than half the size of the Principal Subject.

4D.5 Domain scoring

Members of the group had undertaken preliminary scoring against each domain, and the process involved in the meeting consisted of assessing, on the basis of the greater understanding from the discussions to date, the scores originally provided, and listening to explanations which may justify an initial decision one way or the other. There was also some discussion about the potential relationship in terms of domain scoring between the Principal Subject and the Short Course, with a view that the latter must necessarily score lesser overall amounts across the domains. Generally, this resulted in a number of changes, the completion of areas where gaps had been left, and consideration of the potential difference between a 'gap' and a zero score.

As a result of this process, the following figures emerged:

Figure 11: Tariff domain scores - Pre-U French Principal Subject

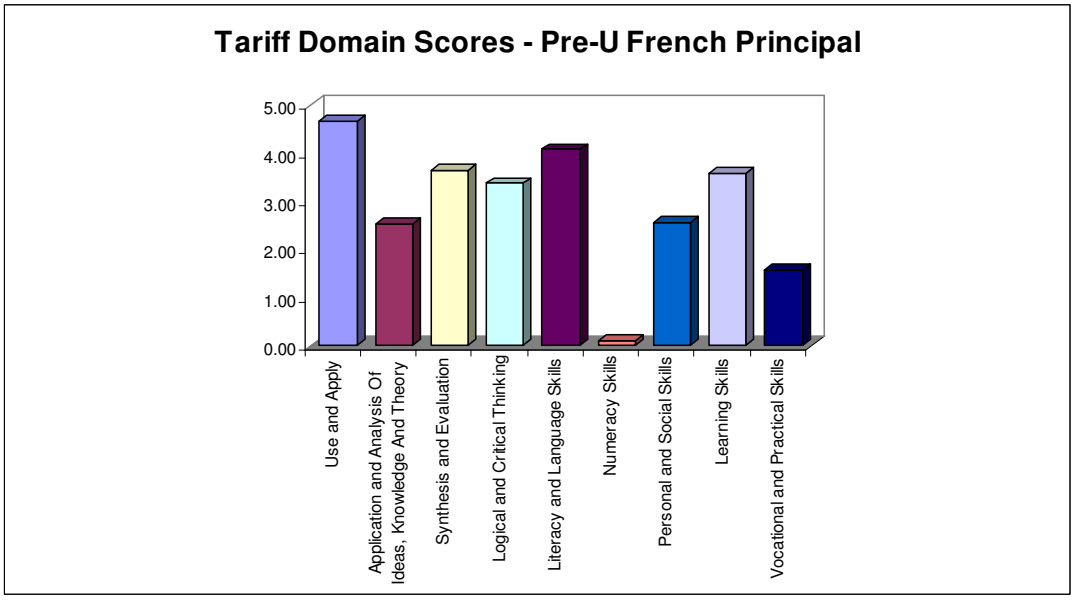


Figure 12: Tariff domain scores – Pre-U French Short Course

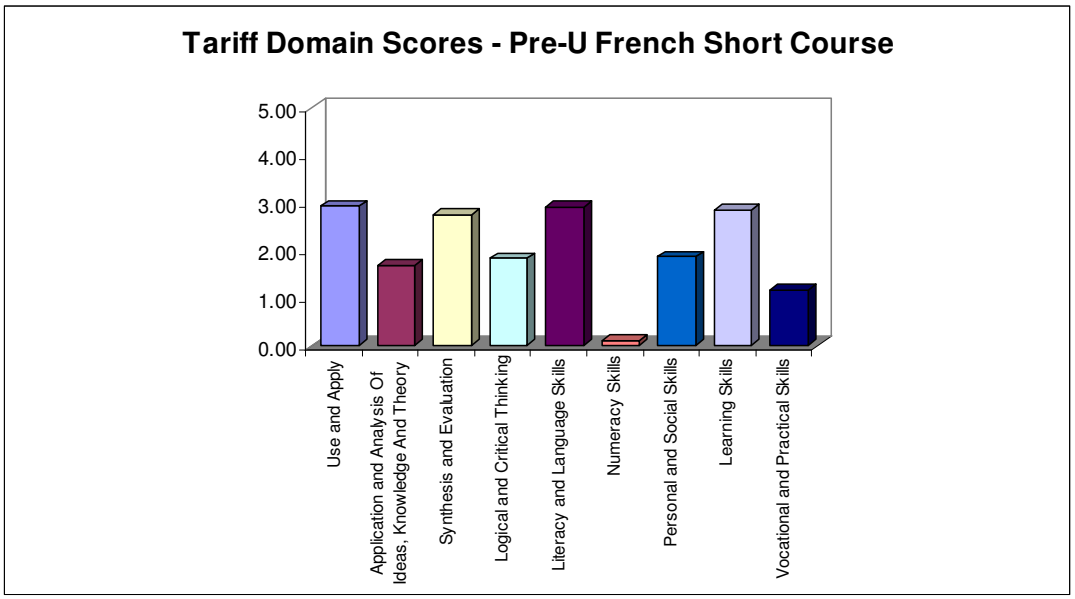


Figure 13: Tariff domain scores - A Level French

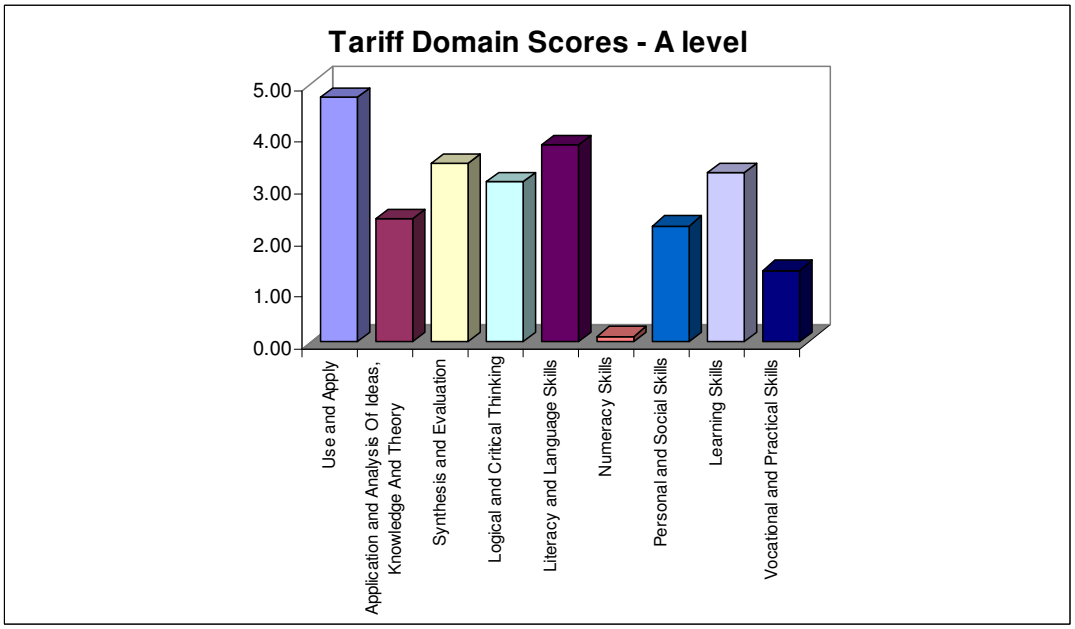


Table 54: Tariff domain scores – French mean scores

Domain Element	Pre-U Short	Pre-U Principal	GCE A Level
1 Use and apply	2.9	4.7	4.7
2 Application and analysis of ideas, knowledge and theory	1.7	2.5	2.4
3 Synthesis and evaluation	2.7	3.6	3.4
4 Logical and critical thinking	1.8	3.4	3.1

5 Literacy and language skills	2.9	4.1	3.8
6 Numeracy skills	0.1	0.1	0.1
7 Personal and social skills	1.9	2.6	2.2
8 Learning skills	2.9	3.6	3.3
9 Vocational and practical skills	1.2	1.6	1.4

It will be noted that the Principal Subject scores were generally higher than the A Level, although overall this only amounted to an average 0.2. The two qualifications showed the same pattern or shape, confirming that each was providing ample evidence of knowledge, understanding and skills associated with successful transition into HE. As far as the Short Course was concerned, the overall position, as confirmed by both the chart and the mean scores, aligns with the conclusion of the group that it had a lesser utility for progression purposes than either the Principal Subject or the A Level.

4D.6 Estimating relative demand - comparing assessment models

4D.6.1 Assessment Objectives

The process of comparison of demand across the qualifications commenced with consideration of the respective assessment objectives as shown below:

Table 55: Assessment Objectives – French

Pre U Principal Subject	GCE A Level
AO1 Understand and respond to texts (spoken and written) (24%)	AO1 Understand and respond in speech and writing to spoken language (32%)
	AO2 Understand and respond in speech and writing to written language (43%)
AO2 Manipulate target language accurately (speaking and writing) (40%)	AO3 Show knowledge of, and apply accurately, grammar and syntax (as described in specification) (25%)
AO3 Select and present information, organising arguments and ideas logically (23%)	Although not a formal assessment objective, this is a clear strand of criteria in the marking grid
AO4 Understand and respond to cultural topics and literary texts (13%)	

In the group's view, AO1 in the Principal Subject, and AOs 1 and 2 in the A Level, aligned, apart from weighting – 24% as opposed to 75%. Similarly, the Principal Subject AO2 aligned with AO3 in the A Level, again apart from the weighting – 40% as opposed to 25%. However, even the additional weightings for the Pre-U confirmed the greater emphasis in the A Level on language skills, and the lesser emphasis on use of cultural material, notably literature, and hence on a different set of skills. This left AOs 3 and 4 for the Principal Subject, areas which were not as explicitly assessed in the A Level, although as indicated in Table 48, implicit evidence of assessment of Principal Subject AO3 was found in the marking grid. This confirmed the group's initial perception that the A Level was language oriented, whilst the Principal Subject went beyond language, and also the view that the Pre-U had a greater emphasis on accuracy than the A Level. As one group member put it:

'Cultural exposure (in the Pre-U) is an extra block and a distinction (in terms of) analysis and synthesis where the Pre-U ups the ante, and asks a different level from the candidates'.

The analysis of and debate on assessment objectives led the group to highlight the following differences between the Principal Subject and the A Level:

Table 56: Different emphases between Principal Subject and A Level - French

Pre U Principal Subject	GCE A Level
Geared towards HE study more specifically by assessment stress on: • Argument, including literary/historic perspective • Acquisition of broader cultural knowledge • Textual analysis	Geared towards use of all four language skills for a greater variety of purposes: • Transactional • Argument • Transfer of meaning • Discussion • Explanation • Evaluation (taken from p 11 of specification, unit content)

From the perspective of the HE representatives, this confirmed that the Pre-U had more utility for progression to HE because of the additional material studied and additional assessment focus (in the form of higher order skills) on such material. It was described as being 'an A Level+'. On the other hand, consideration of assessment objectives also confirmed their view that the A Level was broader in terms of language, probably envisaging a wider spectrum of post-study opportunities. However, the A Level Chief Examiner disagreed with all these views questioning the assumption, hitherto unchallenged, that all HE language courses involved literary studies and so are seeking skills of literary appreciation and analysis from their applicants.

Assessment model

Discussion next turned to arrangements for and features of examination, from which the following was confirmed:

Table 57: Examination arrangements – French qualifications

Pre U Principal Subject	GCE A Level
External	
Linear	Unitised
7.25 hours (240 marks) at Pre-U standard	5.25 hours (400 marks), 50% at AS standard
More extended writing (c42% of testing), 70% of which was in French and 30% in English	Less extended writing (c25% of testing), all in French
Speaking, 25% of assessment, for 15-20 minutes. Compulsory use of external examiner.	Speaking, 30% of assessment, for 30 minutes. Assessment of transactional language additional to Pre-U.

Identifying the above features of the examination arrangements facilitated consideration by the group of respective strengths and weaknesses. It was thought by the HE representatives that linearity in the Principal Subject was a strength, as was the extended writing, and emphasis on argument. Overall it was thought that the

Pre-U was better balanced. As far as the A Level was concerned, it was reflected that in certain contexts the emphasis on oral may be a hindrance in terms of the bridge to HE, and that it might develop a misplaced confidence because although oral skills may be strong, grammatical skills may be weaker. It was thought that this may create an asymmetry between A Level and the first year of HE study. On the other hand, the A Level Chief Examiner considered that, apart from the literary and essay emphases already discussed, in practice the tests for both Pre-U and A Level were similar, but that the A Level provided better preparation for speaking the language as well as, importantly, a greater breadth of application of language usage.

4D.7 Estimating relative demand - comparing assessment requirements

Consideration of this started with an identification of what the sample assessment materials covered for both the Principal Subject and the A Level. Each qualification had four assessed papers: the Pre-U – Speaking; Reading and listening; Writing and usage; Cultural topics and texts, and the A Level – two Speaking papers (one at AS, one at A2); two Listening, reading and writing papers (one at AS, one at A2). It was confirmed that as far as the Speaking papers were concerned, the Pre-U incorporated aspects of both AS and A2 papers for the A Level, although the A Level had the additional transactional component. Notwithstanding the latter, the group determined that the tests across the two qualifications were comparable in linguistic and intellectual demand.

Moving now to the reading, listening and writing papers, the group determined that the reading and listening components were comparable because they involved such similar tasks. As far as the writing element was concerned, it was identified that the task involved slightly longer writing in the Pre-U (350-450 words as opposed to 350-400 words), and that whereas the A Level candidate could be confident that one of four topics (from society, environment, science and technology, and culture) would come up, the Pre-U candidate would have a choice of one from five from the total of fourteen general topics. On the other hand, the A Level candidate would be required to use language for a greater breadth of purpose. The HE representatives determined that, on the basis of the above, and because of the difference in the writing tasks, the Pre-U had a little additional utility for HE.

However, the HE representatives considered that what really distinguished the Principal Subject from the A Level was the Pre-U Paper 4, and it was pointed out that from the start of the deliberations they had identified additional demand in this context because of the requirement for a candidate to display ‘a detailed and sustained knowledge’ which was considered quite different from the requirements of the A Level. The nature of the additional demand in the Principal Subject was considered to be the following:

- The requirement to present argument in three questions as opposed to 1½ in the A Level together with the requirement for writing in French and English;
- The testing of additional knowledge (through Paper 4) which required higher cognitive skills (although it was accepted that higher cognitive skills were assessed in the A Level, these were quantitatively greater in the Pre-U);
- Engagement with literary texts requiring a different, and higher order, skill set from the A Level (Paper 4, part 2) – this may well involve dealing with a wider range of styles of language, and addressing more challenging and longer texts;
- A requirement for longer answers;
- A preponderance of open-ended questions and use of non-contextualised sentences (in Paper 3) as opposed to a greater variety in the A Level (multiple choice, gap filling, transfer of meaning, word selection, phrase explanation, finding synonyms in text, completing sentences);
- A requirement for slightly greater grammatical conceptualisation (for example, the candidate needed to know what adjectives and adverbs were), although similar materials was used for both qualifications.
- Abstraction[11] (Paper 4), considered to be a valuable transferable skill for HE;

It should be noted that whilst the HE representatives agreed with the assessment of additional demand as evidenced by the above analysis, the A Level Chief Examiner, whilst accepting the different emphases (as already discussed) in the Pre-U Paper 4, persisted in the view that, this apart, the examination papers did not present a substantially different level of challenge overall.

Notwithstanding all of the above, it was agreed that until candidate scripts could be perused, consideration of one set of sample assessment materials alone, could not definitively confirm the position in respect of demand.

Short Course

The group continued with the view that the Short Course was the same as an AS on the basis that the relevant examination papers mirrored each other almost completely, and that the detailed consideration of the Principal Subject and the A Level which incorporated all of the features of the Short Course meant that a more cursory consideration of the Short Course was justified. All concurred that there were comparable texts (a slimmed down article and a slimmed down interview in comparison with the Principal Subject and the A Level), and that some of the aspects of the Principal Subject, that distinguished it from the A Level, were not present in the Short Course.

[11] The study of ideas and literary analysis through the cultural topics and texts will require a higher degree of abstraction in learning, discussion and essay work, and bring into play higher cognitive skills of synthetic and analysis.

4D.8 Estimating relative demand – aligning grades

In the light of the paper circulated to the group by Dr Hayward indicating that, in the absence of candidate scripts, it would be necessary to trust the alignment of the A Level A/B boundary to the D3/M1 boundary in the Pre-U, together with the E/U and P3/Fail boundaries, on the basis of what had been accredited by QCA, no consideration of grade alignment was undertaken by the group. This applied to both Principal Subject and Short Course.

4D.9 Allocation of UCAS Tariff points

In order to do this, it was first necessary to return to what had been previously determined in respect of size. The group was reminded that there was not complete agreement on the size of the Principal Subject in comparison with the A Level, with a range from 0% to 20% on the table. As far as the HE representatives were concerned, the initial position had been 10%, 15%, and 20%, although the representative who had indicated 15% had subsequently changed the difference to 20%.

Each HE representative was asked what difference the assessment of demand as conducted above should make to potential UCAS Tariff points. However, the feeling was that because of the skills-based nature of French as a subject, it had been impossible to separate out volume of learning as a discrete entity, and that in arriving at the initial determination of size, demand had almost inevitably been included. The HE representative who had initially gone with 20% confirmed that demand had indeed been included in that assessment. The second representative who had moved from 15% to 20% confirmed that his assertion too had taken account of demand, and the third representative, who had valiantly tried to separate size from demand, confirmed that the evidence generated in discussion on demand, had moved his figure up to 20%. In the light of this confirmation, both Chief Examiners declared they were content, although the A Level representative indicated that he would still prefer a figure of 10%.

This resulted in a decision that for the Principal Subject a multiplier of 1.2 should be applied to all grades.

As far as the Short Course was concerned, it was confirmed that the grades which aligned should have the same number of points as those for AS. No suggestions were made for points for the D1 and D2 grades.

However, in the absence of an equivalent grade to D1 in both Principal Subject and Short Course, uncertainty about whether D2 in the Principal Subject should align with points for the A* in A Level (for which a Tariff value was not yet available), and the

lack of an A* grade in AS, it was necessary to give some thought to values which should be ascribed to the top two grades of the Pre-U qualifications. One view was expressed that without candidate scripts, the group was 'groping in the dark' whilst another indicated that this was not a problem in that values for D1 and D2 could be extrapolated mathematically. With this somewhat unsatisfactory situation not capable of immediate resolution, the meeting of the expert group was concluded.

Application of the 1.2 multiplier across all grades of the Pre-U would result in the following UCAS Tariff points:

Pre-U Principal Subject Grade	Suggested Tariff
D1	176
D2	160
D3	144
M1	128
M2	112
M3	96
P1	80
P2	64
P3	48

Points for the Short Course, with the application of no multiplier, would be:

Pre-U Short Course Grade	Suggested Tariff
D1	
D2	
D3	60
M1	53
M2	46
M3	40
P1	33
P2	26
P3	20

4E MATHEMATICS

4E.1 Prior to the meeting

Prior to this meeting some preliminary work was carried out. This included a detailed mapping of the Mathematics Cambridge Pre-U against the Mathematics A Level, reports from three Higher Education representatives highlighting similarities and differences between the two qualifications and comparative studies from a representative from each Awarding Body. Pre-meeting papers were distributed, requiring members of the group to compare aims, content, study hours, relative size and assessment models of the Cambridge Pre-U and that of the Mathematics GCE A Level.

4E.2 The Expert Group meeting

The Expert Group then met on one occasion for two days (4-5 June 2008) to examine and discuss the evidence listed in Appendix 2 and the preparatory work completed by group members. This section contains an account of the deliberations of this meeting.

The opening session provided an opportunity for the Cambridge International Examinations (CIE) Chief Examiner and the Assessment and Qualifications Alliance (AQA) Chair of Examiners to present their qualifications and for Expert Group members to seek clarification about general issues in relation to the awards.

Following the presentations, initial discussion about the design of the qualifications highlighted a number of similarities and differences, as shown in Table 51. In order to compare like with like, the group decided to compare the Pre-U with the AQA A Level 'Pure Core' (C1, C2, C3, C4) units and the Mechanics and Statistics AS application units M1 and S1, being closest to the Pre-U in content.[12] A Level 'Decision' units were less relevant as were the A2 Mechanics and Statistics units M2 and S2 which take Mechanics and Statistics beyond M1 and S1, as the Pre-U does not include Decision topics or the more advanced Mechanics or Statistics topics on M2 or S2 (such as circular motion, elastic energy, t-tests, chi squared tests and all the other topics on M2 and S2). The availability of Synoptic Assessment was discussed at length at this stage but is covered in more detail in the comparison of assessment models and materials.

[12] AQA Mathematics allows a (2 A2 4 AS) A Level as well as a (3 A2 3AS) A Level

Table 58: Qualification design - Mathematics

Pre-U Mathematics Principal Learning	GCE A Level Mathematics
Duration 2 years	Duration 2 years
Linear -Two 3 hour papers at end of two years of study	Modular: Each unit separately assessed at end of unit.
All sections compulsory. No optional units. Paper 1 Pure Mathematics and Probability. Ratio 2:1 Paper 2 Pure Mathematics and Mechanics. Ratio 2:1 Ratio of Pure to Applied content (as measured by the marks allocated) 2:1	C1, C2, C3, C4 constitute the 'Pure core' 2 optional units in 2 applications are added. Mechanics M1 and Statistics S1 chosen for comparison. Ratio of Pure to Applied content (as measured by the marks allocated) 2:1
No multiple choice questions in assessment.	No multiple choice questions in assessment.
No coursework assessment.	Some coursework assessment possible but rarely taken up as an option. There was no coursework in the AQA modules chosen for comparison
No resits of components – all principal learning can be retaken but only in a new study cycle.	Units can be retaken, with multiple resits possible.
End of award assessment.	Unit assessments can be delayed until the end, however the usual practice is to take the assessment at the end of the unit. .
Synoptic assessment included.[13]	Synoptic assessment included[1].
No Unit grades. Grades on individual papers available on request at Pass, Merit, Distinction.	Unit grades reported to Higher Education.

4E.3 Comparison of aims

There is a great degree of similarity between the listed aims of the two awards, and group discussion focussed on the differences between the two. One Higher Education tutor suggested that all of the Pre-U aims were included in the A-Level aims, but not necessarily assessed in the A Level. Minor or potential differences are summarised in Table 52.

In discussing strengths and weaknesses, it was not possible to agree any weaknesses as such for either qualification – potential weaknesses indicated in Table 52 had mitigating factors and are more in the nature of differences in approach. Also shown in the table is the comparative support for Higher Education progression. As the name implies, the Pre-U was designed specifically to support Higher Education progression; however the AQA Chair of Examiners considered that this was also the sole aim of the A Level and no-one at the group meeting suggested any other aims. One Higher Education tutor found evidence of more proof material in Pre U and felt this to be a strength and advantage for university study. Outcomes from the discussion are summarised in Table 54.

Table 59: Comparison of aims – Mathematics

	Pre U Principal Subject	GCE A Level
Aims	Aims include development of mathematical skills and techniques	Promotion of confidence and fostering of enjoyment is explicitly included.

[13] Evidence for synopticity in each case is discussed in Section 4E.6 and presented in Table 30

	and applications in a wide range of contexts. A key point made was that both more familiar and less familiar contexts are included.	The use of mathematical skills and techniques is included and reference made to their use in more difficult unstructured problems.
Strengths	Linearity of study, giving a longer time to review the subject matter and better assess interconnection. Probability focus in the applied section. As this was a narrower scope than statistics as a whole, it gave an opportunity for coverage to greater depth. .	More examination time (9 hours compared with 6 hours). Candidates have opportunity to show understanding and make comments on their answers. Statistics focus in applied section, covering more modelling and interpretation. Option modules depend on C1 and C2, highlighting interconnection.
Potential Weaknesses	Calculators allowed in all assessment: scientific but not graphics calculators are allowed.	All calculators are banned in C1 where graph sketching and surd manipulation etc. are routinely tested. Graphics calculators are permitted on all other units. However on examination of question papers very little advantage, if any, is given to candidates with graphics as opposed to scientific calculators given the sophistication of modern scientific calculators.
Support for Higher Education progression	Designed specifically with Higher Education progression on mind. More proof material in Pre U might be a strength and provide advantage for university students.	Designed with Higher Education progression as the sole purpose.

4E.4 Determining size – comparison of Guided Learning Hours

Guided Learning Hours for the Pre-U mathematics course had already been agreed by QCA as 380, with specific reference to A Level Mathematics as 360: this was accepted by the group.

It was suggested that perhaps the A Level had more breadth (i.e. a greater number of concepts) and that there might be more depth in the Pre-U. However, it was stated that the greater statistics content and numerical integration in A Level was offset by the following main topics in Pre-U but not in A Level: Combinatorics; geometric distribution; complex numbers; Newton-Raphson method and rates on convergence; and some other small topics. These content differences were discussed, based on prior analyses by the Examiners. However this was covered in more detail later by in-depth analysis of assessment materials (Section 4E.6).

4E.5 Estimating relative demand - comparing assessment models

Discussion by the group of assessment models produced the summaries shown in Tables 55 and 56; the latter incorporating comments by the group.

Table 60: Assessment models – Mathematics

Award	Unit/Paper	Content	Mode	Duration and Length	Weighting
Pre-U	Paper 1 Paper 2	Pure and applied in each	External	3 hours each	50% per paper

A Level	1-6	Pure or applied depending on unit	External	1 hour 30 minutes each	16.7% per unit

Table 61: Comments on assessment models – Mathematics

Pre-U	**A Level**
Final assessment with no retake opportunity within the course.	6 modules, with 2 sittings/year. Candidates can resit any module more than once and retain the best mark.
Only one way to obtain a result. Result transparent.	Research evidence suggests that resits can improve grades in Mathematics as candidates improve their conceptual grasp of topics. Result is transparent as skills and understanding are revealed in detail (i.e. Pure as opposed to applications etc.)
In both assessment models, assessment is focussed for 2/3 of the time on pure mathematics and 1/3 of the time on applied mathematics.	
Candidates need to prepare all material for final assessment.	Candidates need to prepare material mainly for a unit at a time, however later units (C3, C4) depend on knowledge gained in earlier units (C1, C2). Also Applied units depend on C1 and C2, and M2 and S2 on C3 and C4.
No choice of units, so route clear to Higher Education.	Choice of routes but 2/3 common to all routes; individual unit results for all routes available to Higher Education.
No unit grades.	Unit grades available to Higher Education and individual unit UMS marks available routinely on request.
6 Hours assessment: not all content covered.	9 hours assessment: most content covered.

The Assessment Objectives, with weightings supplied by the Examiners, are shown in Table 57.

Table 62: Assessment Objectives – Mathematics

	Pre-U	**Weight**	**A Level**	**Weight**
AO1	Manipulate mathematical expressions accurately; round answers to an appropriate degree of accuracy and understand the limitations of solutions obtained using calculators.	35-40%	Recall, select and apply their knowledge of mathematical facts, concepts and techniques in a variety of contexts	32-40%
AO2	Construct rigorous mathematical arguments and proofs through the use of precise statements and logical deduction, including extended arguments for problems presented in unstructured form.	8-13%	Construct rigorous mathematical arguments and proofs through the use of precise statements, logical deduction and inference and by the manipulation of mathematical expressions, including the construction of extended arguments for handling substantial problems presented in unstructured form.	32-40%
AO3	Recall, select and apply their knowledge of mathematical facts, concepts and techniques in a variety of contexts.	35-40%	Recall, select and use their knowledge of standard mathematical models to represent situations on the real world; recognise and understand given representations involving standard models; present and interpret results firm such models in terms of the original situation, including discussion of the assumptions made and refinement of such models.	10-12%
AO4	Understand how mathematics can be used to model situations in the	15-20%	Comprehend translations of modern realistic contexts into mathematics;	6-12%

	Pre-U	Weight	A Level	Weight
	real world and solve problems in relation to both standard models and less familiar contexts, interpreting their results.		use the results of calculations to make predictions, or comment on the context; and, where appropriate, read critically and comprehend longer mathematical arguments or examples of applications.	
AO5			Use contemporary calculator technology and other permitted resources, (such as formulae booklets or statistical tables) accurately and efficiently; understand where not to use such technology and its limitations; give answers to appropriate accuracy	6-11%

A mapping provided by a Higher Education representative was accepted by the group:

- AO1 Pre U maps partly to AO2 and partly to AO5 in A Level.
- AO2 in Pre U maps to AO2 in A Level
- AO3 in Pre U maps to AO1 in A Level
- AO4 in Pre U maps partly to AO3 and partly to AO4 in A Level.

It was suggested by a Higher Education representative that the mention of 'less familiar contexts' in the Pre-U objectives was a significant difference, however it was hard to ascertain from Assessment Objectives alone, which qualification would be more suitable for access to Higher Education.

More information on the comparative utility of assessments for supporting progression to Higher Education was obtained from a detailed examination by the group of question papers, which also provided evidence of the degree of synopticity evidenced by the assessments. This is shown in Table 56.

No candidate evidence was yet available for the Pre-U, and none was made available for A Level, so scripts themselves could not be compared.

Grade descriptors

Grade boundaries for the Pre-U principal subjects had already been aligned, and would be based on an examination of archived A Level exam scripts. These were accepted on the basis that they would be properly assured by the QCA. The A Level A/B boundary was aligned to the Pre-U D3/M1 boundary; the A Level E/U boundary to the Pre-U P3/Fail boundary. No further discussion took place on the boundaries themselves, but was concentrated on the allocation of Tariff points to resultant grades, as described in Section 4E.9.

4E.6 Estimating relative demand – comparing assessment requirements

A considerable amount of time was spent in a detailed analysis of assessment materials, as at several points in the discussion this had been mentioned as being necessary to properly evaluate assessment demand and compare utility of the qualifications for progression to Higher Education.

Examination papers in A Level and specimen papers (not piloted) in Pre-U were examined in turn and questions identified that were, in the opinion of the Higher Education representatives, uniquely valuable in providing stretch, of value for Higher Education progression, and/or evidence for synopticity. The criteria used to make these judgements were the extent to which the questions challenged the candidate, by their sheer mathematical difficulty and/or by lack of structure. Less structured questions forced a candidate to choose the correct mathematical techniques needed to solve a problem, rather than being given them, and were more like questions faced on a Higher Education Course. Evidence for synopticity was considered by the group to be present where knowledge had to be applied to a problem from a different unit or mathematical topic.

In addition, Dr Jonathan Robbins, one of the Higher Education tutors, had classified all the sample questions as 'Easy', 'Moderate' or Hard'; the categories being defined with relevance to progression to Higher Education. The criteria used in this classification were: the level of mathematical understanding required; the need for candidates to discover for themselves, and apply, the correct techniques; and the level of persistence needed to correctly apply a series of such techniques in order to find a solution. "Easy" questions provided little or no evidence of suitability for an HE course in Mathematics or a strongly maths-related subject (e.g. physics, certain computer science and engineering courses). "Moderate" questions provided substantial evidence of suitability for an HE course in Mathematics or a strongly Mathematics-related subject. "Hard" questions were capable of discriminating amongst the top group of candidates well suited for a Mathematics degree. Success on these questions was regarded by Dr Robbins as a rough indicator of the capacity for an upper-second-class or first-class performance at degree level.

The questions which fell into the above categories, including the 'Hard' category of Dr. Robbins, are shown in Tables 58 and 59. There were 15 stretching questions identified in the Pre-U papers, of which 13 were classified as 'Hard' and 6 specifically requiring Synopticity. Corresponding totals for the A Level were 12 stretching, 9 'Hard' and 2 requiring Synopticity. The ratios between the Pre-U and corresponding A Level values suggest that the Pre-U scored more highly particularly in providing the more demanding questions and opportunities for synopticity. The more demanding questions were perceived as being more similar in style to the challenging problems to be expected in Mathematics at Higher Education level, hence as providing most utility for HE progression. In addition, in the view of one HE tutor, because three of

the A Level papers are taken at the end of the first year whereas the Pre-U is taken at the end of two years, greater stretch would be expected "because of the nature of mathematics".

Table 63: Pre-U questions providing most utility for progression – Mathematics

Question No.	Comments	'Hard' [14] (JR)	Requires Synopticity
Pure Mathematics Paper 1			
5	Part 2 is at the highest level found across all papers.	✓	
8	Parts 2 and 3 agreed beyond A Level	✓	
9	Unstructured[15] – more structure would be provided in A Level. Good example of opportunity to demonstrate Synopticity.	✓	✓
10	Part 3. Very hard –perseverance needed. Synoptic Geometry and Trigonometry involved.	✓	✓
11 (ii)	Unstructured	✓	
Pure Mathematics Paper 2			
1	Hard – less structured than A Level	✓	
3	Part 2. All grade A and above at A Level.	✓	
7	Complex numbers – extra content compared with A Level. Requires Synopticity.		✓
8 (ii)	Less structure than A –level.		
9 (ii), (iii)	Hard; familiar and unfamiliar contexts.	✓	
10	Part 4. Hard; unfamiliar context.	✓	
Probability			
14	Combinatorics extra in Pre-U compared with A Level.	✓	
15(iib)	Needs decision on which distribution to use. Synoptic – needs extra material from elsewhere in the course.	✓	✓
Mechanics			
13(ii)	Extra to A Level; demanding. Requires Synopticity.	✓	✓
14	Demanding; potential for Synopticity.	✓	✓

Table 64: A Level questions providing most utility for progression – Mathematics

Question No.	Comments	'Hard' (JR)	Requires Synopticity
AQA Pure Mathematics, Unit C2			
4(b)	Hard	✓	
5	Synoptic elements across units, but not across topics.		✓
AQA Pure Mathematics, Unit C4			
5(b)	Unstructured question	✓	
7(c)	Non-standard[16] question	✓	
8(a)	Unstructured question	✓	
AQA Statistics			
3	Not covered in Pre-U		
5c(ii), d(ii)	Not covered in Pre-U	✓	
6b(iii)	Covered in Pre-U but hard	✓	
AQA Mechanics			
2	Not covered in Pre-U. Synoptic elements.		✓
4(c)	Covered in Pre-U but demanding	✓	

[14] In the context of the discussion, a 'hard' question was taken to be one requiring a high level of mathematical understanding and of the type most similar to that expected in Higher Education

[15] In the context of the discussion, 'structured' questions were those providing information or clues as to how to proceed to an answer, for example by suggesting the use of the mathematical tools or techniques involved. In contrast, 'unstructured' questions provided no such assistance and required candidates to discover for themselves the route, techniques and components necessary to a solution.

[16] A 'non-standard' question would be one that a candidate would be unlikely to have encountered before in the form presented, forcing an appraisal of the question and how it could be related to 'standard' questions, before proceeding to an answer.

5	Not covered in Pre-U. Conceptually challenging.	✓	
8(c)	Kinematics in vector form not covered in Pre-U. Conceptually challenging.	✓	

4E.7 Estimating relative demand - comparison of candidate work

The Pre-U is to be taught for the first time from September 2008; therefore no candidate evidence was available for this process and a comparison could not be carried out.

4E.8 Domain Scoring

Domain scores were collected from all members of the group prior to the Expert Group meeting and the resulting average scores formed the starting point for discussion. Minor changes only were made to the previous scores during discussion, with the results shown below in Figs. 15 and 15.

Differences between scores for Pre-U and A Level were very small. Pre-U was marginally ahead in 4 areas:

- Application and Analysis Of Ideas, Knowledge And Theory
- Logical and Critical Thinking
- Numeracy Skills
- Learning Skills.

A Level was marginally ahead in two:

- Synthesis and Evaluation;
- Vocational and Practical Skills.

However, in no case was the difference greater than 0.2 points, out of an overall possible range of 0-5 points.

One HE representative felt unable to draw any conclusions from the domain scoring exercise, for the following reasons:

- the averages weighted all categories equally, without taking account of their relevance to mathematics
- averages across the panel did not represent a consensus so much as an offsetting of the contrasting preliminary views prior to the meeting.

Figure 14: Tariff domain scores – Pre-U Mathematics

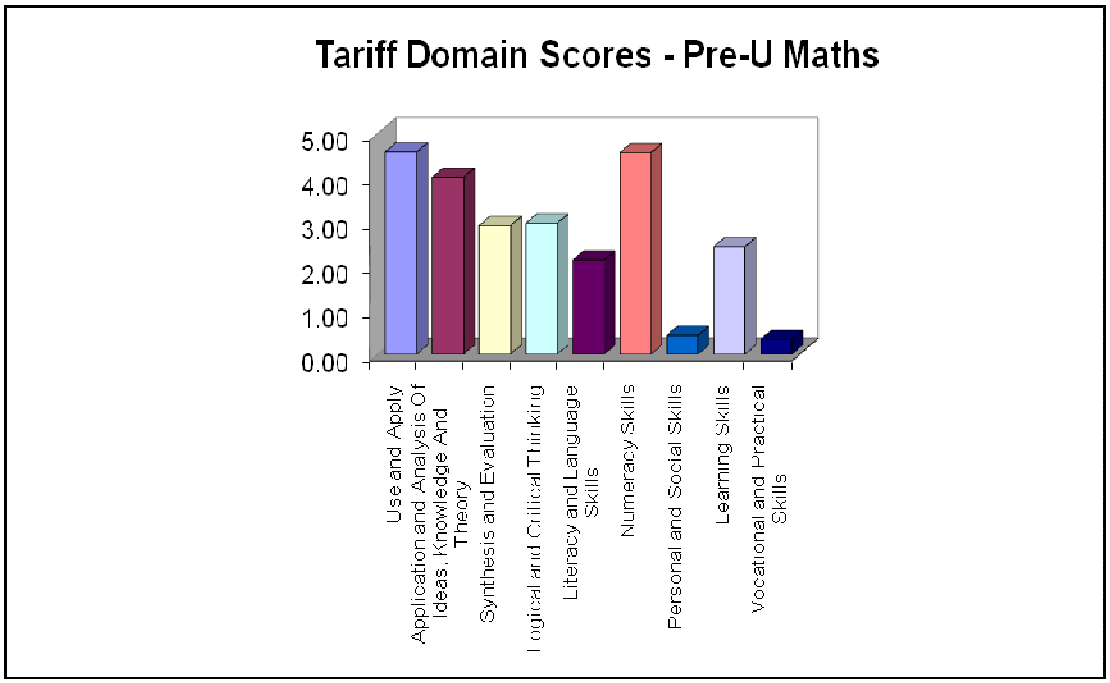
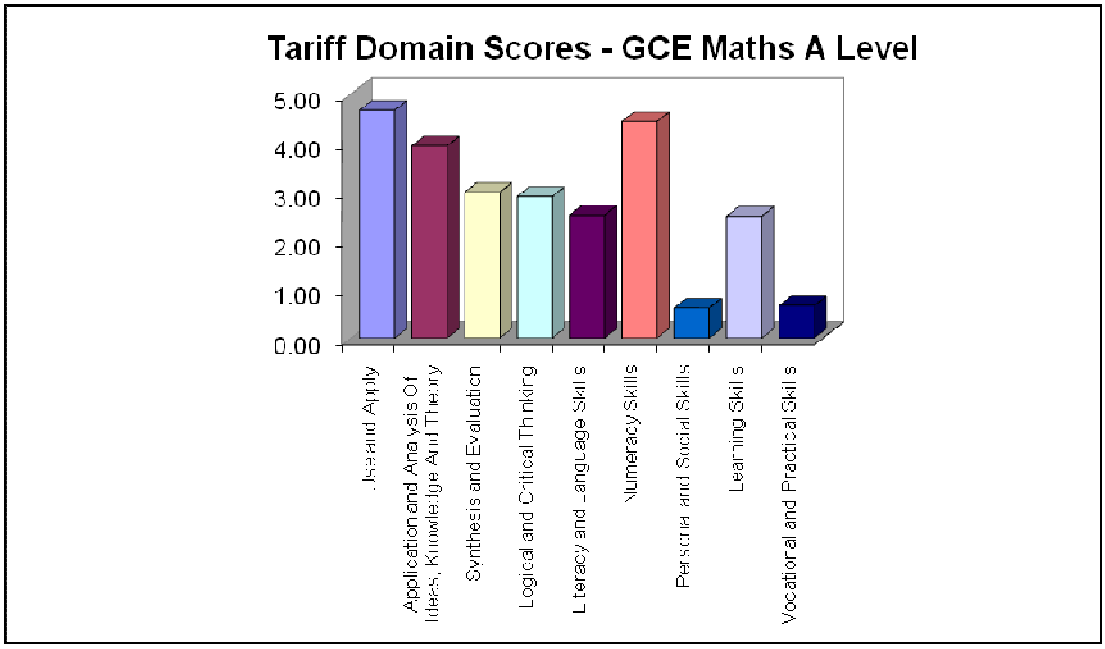

Tariff Domain Scores - Pre-U Maths
5.00
4.00
3.00
2.00
1.00
0.00
Use and Apply Application and Analysis Of Ideas, Knowledge And Theory
Synthesis and Evaluation
Logical and Critical Thinking
Literacy and Language Skills
Numeracy Skills
Personal and Social Skills
Learning Skills
Vocational and Practical Skills

Figure 15: Tariff domain scores – Mathematics A Level



4E.10 Recommended allocation of UCAS Tariff Points

As discussed in Section 4E.5, grade boundaries for the Pre-U Principal Subjects had already been aligned, with the A Level A/B boundary aligned to the Pre-U D3/M1 boundary and the A Level E/U boundary to the Pre-U P3/Fail boundary. These alignments are shown in Table 58. Based on these values, provisional Tariff points were allocated to the Pre-U, as shown in the table, on the assumption that there was no difference in the utility of the Pre-U and the GCE A Level for progression to Higher Education. Intermediate Tariff points were obtained arithmetically for the P2 to M1 grades with a standard interval of 13 ((120-40)/6), and the same equal interval was used to generate points values, beyond 120, for the D2 and D1 grades.

Table 65: Initial allocation of Tariff points on 'equal-utility' basis – Mathematics

Pre-U grade	A Level Grade	UCAS Tariff points
D1		146
D2		133
D3	A/B	120
M1		106
M2		93
M3		80
P1		66
P2		53
P3	E/U	40

The assumption of equal utility for progression to Higher Education is based on:

- An equal volume of learning
- Equivalent assessment demand

- Equivalent domain scores.

The group was therefore invited to consider whether the results of previous discussions had discovered sufficient difference in any of these characteristics to justify a change in the Tariff points from those provisionally allocated above, and to choose a corresponding multiplier for these provisional points. In this context, a multiplier of 1.0 would imply acceptance of the equal-utility assumption and no change to the above provisional points; a smaller multiplier would imply lower utility of the Pre-U; and a larger multiplier would imply higher utility of the Pre-U.

Based on the previous discussion, it was clear that any differences in utility between the two qualifications were most clearly established in terms of assessment demand, with the Pre-U having scored somewhat more highly, particularly in providing the more demanding questions and opportunities for synopticity. This added to a possible increased demand associated with a linear rather than a modular assessment model, and gave the potential for the Pre-U to have greater utility.

However, it was pointed out by Higher Education tutors that the increased grades and Tariff points, available in the Pre-U without further adjustment, already provided an opportunity for the best candidates to respond to this increased demand and obtain higher grades and points. The Tariff value, currently unknown, to be given to the A Level A* grade, was regarded as highly pertinent to this discussion, as this grade could offer a similar opportunity to A Level candidates. The grade would also be based on performance at A2 and would therefore be less susceptible to enhancement by resits.

Overall the Higher Education tutors agreed that the Pre-U did provide more discrimination at the high- performance end of the range; less at the low-performance end. It would be valuable in discriminating amongst students for progression to Higher Education, although there was a need to consider candidates progressing to subjects other than Mathematics who might cope less well with the increased demand. After considerable discussion to balance the above points, the following conclusions were reached by the Higher Education representatives:

- An overall multiplier of 1.05 was agreed
- This was consistent with a larger number or learning hours for the Pre-U: itself consistent with and reflecting a more demanding style of assessment
- In the view of one out three tutors, the Tariff points for the top grade should not be increased without the opportunity to evaluate candidate evidence
- It was essential to review candidate evidence as soon as possible, and to see how Pre-U question papers developed, in order to review the conclusions

- For the same reason, it was essential to know the Tariff score for the A* grade, particularly as extrapolation is less reliable than interpolation.

Table 61 shows the effect of the chosen multiplier on the preliminary Tariff scores, rounded to the nearest whole number.

Table 66: Adjusted UCAS Tariff Points – Mathematics

Pre-U grade	Preliminary UCAS Tariff points	Adjusted UCAS Tariff points[17]
D1	146	153[18]
D2	133	139
D3	120	126
M1	106	111
M2	93	98
M3	80	84
P1	66	69
P2	53	56
P3	40	42

[17] With a multiplier of 1.05

[18] One out of three Higher Education tutors considered that the top value should not change without candidate evidence

APPENDIX 1 BIOGRAPHIES OF THE EXPERT GROUP MEMBERS

A1E Global Perspectives and Independent Research Report

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Rachel Bettley**

Current Position: Development Officer

Organisation: CIE

Qualifications: BA European Business Economics, BSc Psychology

Brief Biography

Rachel Bettley has been developing qualifications at Cambridge Assessment for the past ten years during which time she has worked on large scale projects in the UK including curriculum 2000 reforms and implementation of vocational GCSEs. For the last two years she has worked for the University of Cambridge International Examinations (CIE) as a Development Officer, managing the development of new IGCSE pilots, the Cambridge Lower Secondary Programme and core of the new Cambridge Pre-U Diploma. Rachel has also worked on a wide variety of curriculum and assessment development projects overseas including educational reforms in Brunei and assessments for bi-lingual programmes in Europe.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Hywel M. Davies**

Current Position: Head of Admissions and Recruitment

Organisation: University of Wales, Aberystwyth

Qualifications: BA Hons, PhD Research

Brief Biography

Hywel M. Davies has been Head of Admissions and Recruitment at University of Wales, Aberystwyth for ten years. He has worked at the University since 1980 in a variety of Registrar and Admissions capacities.

He is actively involved in developing access to Higher Education and is a member of numerous partnerships and groups across Wales including:
Executive Committee of SWWOCAC (South West Wales Open College and Access Consortium), Director of Wales Access Unit, Higher Education Credit Initiative Wales, Ceredigion Lifelong Learning Strategic Partnership, Welsh Baccalaureate Qualification: Higher Education Advisory Team and ELWA Mid Wales Regional Committee

His academic and research interests lie in the political cultures of Wales, loyalism and emigration from Wales to the United States of America during the 1790s.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Martin D W Jones**

Current Position: Product Manager

Organisation: Cambridge International Examinations

Qualifications: BA, MLitt, FRHistS

Brief Biography

Product Manager responsible for 29 syllabuses drawn from across the arts and social sciences disciplines, including all of CIE's growing portfolio of national studies courses and Pre-U Classical Heritage and Pre-U Comparative Government & Politics.

1977 - 1998 School teacher.
1999 - 2006 Subject Officer, OCR.
2006 - date Product Manager, CIE.

consultant to Hodder for its Access to History GCE series from 2003.
consultant to the Victoria & Albert Museum on secondary education from 2005.

adviser on secondary school History/the Humanities to the Sutton Trust, the Specialist Schools Trust, the Institute of Historical Research and the Royal Historical Society until 2006.

series editor of the endorsed books, CD-ROMs and DVDs for OCR's GCE History B specification (Heinemann), publishing in 2008.
author of two A Level History textbooks and various articles in academic journals.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Jo Lally**

Current Position: Acting CE GPR

Organisation: CIE

Qualifications: BA Oxon, MA, PGDip Translation, PGCE

Brief Biography

2005 - present PE Unit 4 OCR Critical Thinking A Level
2005 - present OCR Trainer
2006 - present PE Paper 2 CIE Thinking Skills AS
2008 onwards PE Paper 3 CIE Singapore Knowledge and Inquiry

2006 Lally et al AS Critical Thinking for OCR Unit 2
2006 Lally and Hart A2 Critical Thinking for OCR Unit 4
2008 Revised editions of AS and A2 Critical Thinking for OCR
2008 (forthcoming) Lally Teacher Resource Files to accompany Critical Thinking for OCR AS and A2
2008 Updated NEC distance learning materials for Critical Thinking AS

1997 - 2007 Teacher of German and Critical Thinking (with subject responsibilities from 2001).

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Patrick Walsh-Atkins**

Current Position: Chief Examiner etc

Organisation: Various examination boards

Qualifications: MA. D.Phil

Brief Biography

Retired Curriculum Deputy Head
Currently Chief Examiner for OCR Government and Politics
- Principal Examiner for OCR General Studies Coursework
- Principal Moderator for OCRs Level 3 Extended Project
- Moderator for AQA's Level 3 Extended Project Pilot
- Reviser for AQA's A Level History
- Examiner for IBO's Extended Essay-Politics

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **David Walton**

Current Position: Chief Examiner for A Level General Studies A

Organisation: AQA

Qualifications: BA (Hons); Cert. Ed; FCIEA

Brief Biography

Chairman and Chief Examiner for JMB/NEAB A Level General Studies (1993 - 2001)
Examiner for AQA Key Skills Communication Level 3 (2001 - 2003) and Acting Principal Examiner (2003)
Test Writer and Editor for Key Skills Communication Levels 3 and 4 (2001 - present)
Scrutineer and Reviewer for the Qualifications and Curriculum Authority (QCA)

Compliance Manager for GNVQ External Tests, Joint Council for General Qualifications (1997 - 2002)

Vice Principal of Strode Tertiary College, Street, Somerset (1982 - 1996) and Acting Principal (1996 - 1997)

Governor of Keinton Mandeville Primary School (1988 - 2004) and Chair of Governors
(1991 - 1999)

Publications:
Performance Indicators for Somerset Colleges commissioned by Somerset LEA and published by the Further Education Staff College (1987)
A/AS level General Studies Revise Guide (Co-author) published by Longman (1994)
AS/A Level General Studies A Teachers' Guide published by AQA (2000)
General Studies Magazine (Co-author and Co-Editor) Philip Allan Updates (2001)
Do Brilliantly at AS General Studies (Co-author) Harper Collins (2002)
Do Brilliantly at A2 General Studies (Co-author) Harper Collins (2003)
AS/A Level General Studies Course Text (Co-author and Editor) Hodder Murray (First Edition 2000, Second Edition 2005, Third Edition 2008)

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Stuart Whitwell**

Current Position: Online Forum Coordinator for CIE's Global Perspectives / IRR; Head of Critical Thinking; Head of the Independent Learning Programme, Teacher of English

Organisation: Hampton School

Qualifications: PGCE, PhD (lit.)

Brief Biography

I have been a teacher of English for 7 years in state and independent schools. Here at Hampton I developed an independent learning programme several years ago, a project that anticipated developments such as CIE's Indepent Research Report. I established the Critical Thinking Programme here at Hampton School four years ago. I have been an associate examiner for OCR's critical thinking. I have worked with CIE for almost a year on developing their programme, working with both the assessment side and the course design. I have also done some limited trials on the presentation aspect of the programme. I became online subject coordinator for GPIR at the end of 2007. Recently I have been commisioned to write examination questions for Cambridge Assessment's Thinking Skills Assessment.

A1B Biology Expert Group

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Richard Fosbery**

Current Position: Chief Examiner, Cambridge Pre-U Biology

Organisation: CIE

Qualifications: BSc, GCSME, CBiol.

Brief Biography

Richard is Chief Examiner for Cambridge Pre-U Biology; he was a Chief Examiner for Biology and Social Biology for UCLES/OCR for 14 years (1993 to 2007). He is author of various A Level and GCSE textbooks, revision guides and resources. He has run many successful INSET courses to support GCE Biology including the online course for teachers of the CIE AS/A Biology syllabus.

Richard started his teaching career in Jamaica in 1973. For many years he was Head of Biology at the Skinners' School in Tunbridge Wells, Kent. Since 2003 he has been a freelance educational consultant but from 2006 to 2007 taught full time at James Allen's School in London.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Harriet Jones**

Current Position: Lecturer

Organisation: University of East Anglia

Qualifications: PhD

Brief Biography

I am a lecturer in Biology, specialising in first year teaching, specifically biodiversity and general skills for biologists, including maths and literacy. I organise several first year modules and within them assist the students in the transition from school to University. I have been researching the transition to university, in relation to biology undergraduates, since 2004. Education and career to date:
1989 BSc hons Botany, University of Bristol
1994 PhD in Biology, University of Birmingham
1994-9 Postdoctoral Research positions:University of Birmingham, Kairos Scientific in California and Imperial College.
1999 Assistant Commercial Manager, John Innes Centre
1999-2006 Senior Demonstrator/Teaching Fellow, Department of Biology, UEA
2006-date Lecturer, School of Biology, UEA
2005-date Consultant to post-graduate training programmes, World Land Trust
Relevant Research Awards:
2004: I researched the way school practical classes were run, written up and assessed, and looked at ways in which we could demonstrate to undergraduates how specific skills learnt at school could be used when writing in a scientific style at degree level.
2006: I investigated school pupils' perceptions of the way coursework would be handled at university and related this to their experiences from school and their evaluations of coursework feedback at university. I also looked at the teaching of maths in school, and created a course for undergraduates that helped to increase confidence in maths and provide them with numeracy skills relevant to a biology degree.
2007: I investigated ways of improving levels of literacy in undergraduates. This involved looking at the way writing skills were taught in schools.
I carry out a lot of outreach work with schools across Norfolk, to raise aspirations of Y7-11 and in pre University preparation in Y12-13. I also run workshops to help pupils with the A Level biology syllybus, and realistic university taster events.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Dr Ian Kay**

Current Position: Senior Lecturer in Physiology

Organisation: Manchester Metropolitan University

Qualifications: BSc PhD CBiol MIBiol

Brief Biography

I graduted in 1983 with a degree in Biological Sciences from the then Wolverhampton Polytechnic. My PhD in respiratory physiology was obtained from the School of Pharmacy, Liverpool Polytechnic. Following this I was a research fellow in the Department of Pharmacology at Birmingham University. I am a member of the Institute of Biology, The Physiological Society and the American Physiological Society.

In 1990 I was appointed to a lectureship at Manchester Polytechnic, now Manchester Metropolitan University. I am currently subject leader for Physiology/Pharmacology and also Admissions Tutor. Within the role of Admissions Tutor, I also take responsibility for schools liaison.Other roles I have undertaken within my School include Industrial Training Tutor, Subject Leader for Combined Honours Biology and membership of Faculty Board.

My research interests at present relate to teaching and learning. I am a member of the editorial board for the Journal of Biological Education, the international member of the Teaching Group of the American Physiological Society and ex-convenor of the teaching group of the Physiological Society. I am an external examiner for year 1 Basic Medical Scinces at Queen Mary College London and for the MSC in Speech and Language Science at University College London.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Dr Rick Nelms**

Current Position: Product Manager

Organisation: CIE

Qualifications: BSc, PGCE, PhD

Brief Biography

Product Manager for Biological Sciences, University of Cambridge International Examinations, 1 Hills Road, Cambridge. From 01/06/2002-present
- Oversight of standards in a portfolio of A Level and Pre-U Biology syllabuses for varied international and Ministry customers including management of a team of Principal Examiners, Revisers, Vetters and Examiners, contributing as required to CIE marketing, training, research and support, Project leader managing significant change across CIE

OCR KS3 and GNVQ Science question setter 1996-2000
OCR / AQA / CIE A Level / O Level / IGCSE / KS3 Biology Examiner 1995-2004
OCR A Level Biology / Human Biology Reviser 1997-2006
OCR/TTA Online, Onscreen assessment in numeracy for NQTs - question setter, editor and support material contributor 2000-2002
Science, Technology and Mathematics Council National Training Organisation Forum member 1994-2003
QCA GNVQ Science Advisory Committee member 1995-1998

Curriculum Co-ordinator for Science, Technology and Mathematics, Head of Biology, Teacher of Biology and Learning Support, and Course Review Co-ordinator, Long Road Sixth Form College, Cambridge. From 01/09/93 to 31/05/2002.

Teacher of Biology, then Senior Subject Tutor in Biology and Cross college TVEI flexible learning co-ordinator, Priestley College, Warrington, Cheshire. From 1983-1993.

NERC Research Assistant. Liverpool Polytechnic, Merseyside. 1979-1982. Research in Biology.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Dr David Rodney Slingsby**

Current Position: Chief Examiner, Salters-Nuffield Advanced Biology

Organisation: Edexcel Foundation

Qualifications: B.Sc (Hons), Ph.D., PGCE, M.I.Biol, Chartered Biologist

Brief Biography

1966 to 1972 University of Bristol. B.Sc and Ph.D in Plant Science
1972 to 1973 University of London, Institute of Education, PGCE 1973 to 1980 Biology teacher at Ripon Grammar School, North Yorkshire
1980 to 1986 Head of Biology, Pate's Grammar School for Girls, Cheltenham, Glos
1986 to 2002 Head of Biology, Wakefield Girls' High School, West Yorkshire
2000 to 2002 Assistant lecturer, Open University, S103 Science Foundation.
2002 obliged to take early retirement from full time teaching on health grounds.
Salters-Nuffield Advanced Biology.member of writing team, appointed Principal Examiner 2003 and Chief Examiner 2007
British Ecological Society (a learned society) Chair of Education committee since 1999. Executive Editor and Chair of Editorial Board, Journal of Biological Education (IOB)
Appointed member of British Council Disability Advisory Group 2007
Assistant Moderator, Science GCSE Coursework (AQA) 1987 to 2007
Assistant Examiner, Cambridge International 2007 - marked Singapore A Level Biology
Continued and ongoing academic research - I have worked on a Scottish Natural Heritage (SNH) ecological site in Shetland since 1968 and published a number of scientific papers in peer-reviewed journals as well as SNH reports. I led an expedition of Aberdeen University students to do a project on the site in 2006.
I am interested in educational research, particularly in the promotion of good practice through innovative assessmentassessment. I have recently (London 2006) attended conferences of ERIDOB (European Research in Didactic of Biology) and have been invited (as editor of JBE) to the next one in Utrecht in September 2008. I attended ESERA (European science education research organisation) in Malmo, Sweden in 2007.
I also undertake educational consultancy including occasional work for QCA

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Dr Martin R Speight**

Current Position: Reader in Zoology, Director of Teaching for Biological Sciences, Oxford, Tutorial fellow in Biology, St Anne's College Oxford

Organisation: University of Oxford

Qualifications: BSc (Wales), MA (OXON), DPhil (York)

Brief Biography

Teaching at Oxford (30+ years) in invertebrate zoology, marine & terrestrial ecology & conservation, tropical ecology & pest management

Supervision of graduate students in tropical ecology, forest and reef research and conservation. Projects in E. Africa, Far East, Australia & Caribbean

Administration of biological sciences honours degree teaching, including day to day organisation as well as strategic future planning of course structures and syllabuses. Responsible for biological sciences admissions for Oxford.

Tutorial Fellow in Biology at St Anne's College (29 years). Tutor for Admissions at St Anne's for 7 years, Vice-Principal for 5 years

A1C Economics Expert Group

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Alain Anderton**

Current Position: Chair of Examiners, GCE Economics, AQA

Organisation: AQA

Qualifications: MA (Oxon), PGCE

Brief Biography

Teaching experience	1975-1999 Codsall High School - a variety of responsibilities teaching Economics, Business Studies, Humanities, RE and General Studies including Head of Department, Librarian and Deputy Head of Year - full time to to 1983 and part-time after. 1985-1987 Advisory Teacher in Economics for Staffordshire LEA 1993-1997 Staffordshire University, Lecturer in Economics, teaching on the PGCE course in Economics and Business Education
Examining experience of different	1979 Appointed to be the Economics Association representative to JMB subject committee for A Level Economics. Since then, I have sat continuously on a number committees for both Economics and Business Studies. Since 1995, Chair of Examiners for AEB, now AQA Economics A Level.
Publishing	I have written a wide range of educational materials for Economics and Business Studies both at GCSE and A Level. My first textbook, An Introduction to Social Economics (Heinemann Educational) was published in 1980. Currently, I have five major textbooks in print - Economics for GCSE (Heinemann Educational) GCSE Business Studies (Causeway Press) Economics (Causeway Press) A Level Business Studies for AQA (Causeway Press)

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Michael P Clements**

Current Position: Professor of Economics

Organisation: Department of Economics, University of Warwick

Qualifications: BSc University of Bristol, MSc University of York, DPhil Nuffield College, Oxford.

Brief Biography

Appointments Held
Economist at Oxford Economic Forecasting, November 1984 to February 1988. Research Officer at the Institute of Economics and Statistics, University of Oxford, March 1988 to September 1995, employed by the University under the direction of Professor D. F. Hendry on ESRC financed projects. Research Fellow in Economics at Warwick (Oct. 1995 until Sept. 2001), Senior Lecturer at Warwick (Oct. 1999 until Sept. 2001), Reader at Warwick (October 2001 until September 2007), and as of October 1st 2007 Professor.

Research and Publications
Editor of the International Journal of Forecasting since November 2001. Co-author of two books on economic forecasting, author of a book on forecast evaluation, co-editor of a volume of contributions from international experts (Companion to Economic Forecasting, Blackwells), author of over fifty articles in academic journals and chapters in books.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Mark Dowling**

Current Position: Deputy Director, Assessment Services

Organisation: University of Cambridge International Examinations (CIE)

Qualifications: MA, PGCE, Fellow of the Association for Educational Assessment - Europe

Brief Biography

Current responsibilities:
Writing and updating of CIE code of practice and associated procedural documents
Proposing awards of A Level and AS Level grades across all subjects to CIE's Chief Executive
Managing CIE Research Team
Safeguarding of assessment quality during introduction of on-screen marking
Devising and implementing awarding procedures for new suite of AS and Levels
Co-chairing awarding of grades to Singapore A Level candidates for Singapore Examinations and Assessment Board
Chairing CIE Examiner Quality Council
Managing Appeals against the outcome of enquiries about candidates' results
Briefing, training or induction of Product Managers (Subject Officers), Principal Examiners and new staff
Contributing to Cambridge Assessment Network training programmes for practitioners from other countries
Product Manager (Subject Officer) for Economics
Attending grading meetings of the Malaysian Examinations Council and Malaysian Examinations Syndicate to endorse their standards
Development of grading and grade review procedures for the new Namibian Senior Secondary Certificate, including a week training assessment staff in Namibia

25.08.06-24.02.07 Secondment to Hong Kong Examinations and Assessment Authority (HKEAA) as advisor on the setting up of the professional component of their Quality Assurance programme

1990-1996 Officer in Charge of Cambridge Modular A Levels
1989-present University of Cambridge Local Examinations Syndicate (Cambridge Assessment)
1973-1988 Secondary / Sixth Form College teacher of Economics and History, including Head of Department and Senior Master

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **John Hunter**

Current Position: Lecturer in Econometrics

Organisation: Brunel University

Qualifications: B.A. Economics, Warwick University; MSc Economics, Birkbeck College; PhD Econometrics, London School of Economics

Brief Biography

I have worked at Liverpool University on the SSRC funded Liverpool International Transmissions Project and at Birkbeck College on the Programme for Quantitative and Comparative Macroeconomics.
I have lectured level I Economics and Level III Applied Econometrics at Southampton University; Level II Macroeconomics and Msc Econometrics at Queen Mary College, London; Level III and Msc Econometrics at Surrey University.
At Brunel University, I lecture Level III Financial Engineering and Econometrics, MSc Modelling Financial Decisions and have sucessfully supervised Phd students in Econometrics, Finance and Macroeconomics. I am the Brunel University co-ordinator for the Economics Network, have been a member on the University Special Committee on Centralisation of Admissions and Economics representative on the University Admissions Committee.
I have been a consultant for HM Treasury, OFTEL, The OFT, Accenture and KPN Mobile. I have been external examiner for doctoral theses at Middlesex University and Nuffield College, Oxford; external lecturer of Msc Statistical Methods at City University Business School and Applied Microeconomics at Cardiff University Business School. I am External Examiner to David Game College, University Foundation Programme and I wrote the David Game University Diploma Programme.
I have published widely in Applied Economics, Finance and Econometrics for example: With RP. Smith , “Cross Arbitrage and Specification in Exchange Rate Models”, Economics Letters 18, 1985. With N. Isachenkova, “Failure Risk: A Comparative Study of UK and Russian Firms”, Journal of Policy Modelling, Vol 23/5, pp 511-521, 2001. With A Serguieva, “Fuzzy Interval Methods in Investment Risk Appraisal”, Fuzzy Sets and Systems, 142, 443-466, 2004 . With S.P.Burke, “Modelling Non-Stationary Economic Time Series: A Multivariate Approach”, Palgrave, June 18 2005 (ISBN 1-4039-0202-X).

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Andrew Ireson**

Current Position: Head of Economics

Organisation: Oundle School

Qualifications: M.A. Cantab , PGCE, DipFM

Brief Biography

Currently Head of Economics at Oundle School. Teacher of A level Economics and Maths for over 20 years. Examiner for various A level boards over the years. Currently, recently appointed Chief Examiner for Pre U Economics. Author of various articles for Economics publications and regular presenter at A level revision lectures in Economics.

Will be taking over as Head of Exams at Oundle School in September and am also an ISI School Inspector.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **LASSELLE**

Current Position: Senior Lecturer

Organisation: University of St Andrews, School of Economics & Finance

Qualifications: PhD (Doctorat ès Sciences Economiques), Université de la Méditerranée, France

Brief Biography

ADMINISTRATIVE TASKS at the University of St Andrews
School of Economics & Finance
Co-Director of Admissions, from August 2007
Director of Teaching, and as such Member of the School Executive, between 08/2006 and 07/2007 and between 10/2004 and 01/2006
Chair of the School Teaching Committee, between 08/2006 and 07/2007 and between 10/2004 and 01/2006
Examinations Officer between 09/2002 and 06/2005
First-Year Co-ordinator between 09/1999 and 06/2004
Personal Tutor of a dozen Honours students per year since 09/1999
Charge of the visits of prospective students between 09/1999 and 06/2002

Faculty of Arts
Schools' Assessor for the Arts Faculty Business Committee between 02/2006 and 02/2007
Advisor in the Faculty of Arts between 09/2004 and 01/2005
Sub-Honours Advisor in the Faculty of Arts, 2002-03

UNIVERSITY
Member of the Teaching, Learning & Assessment Committee, between 08/2006 and 07/2007 and between 10/2004 and 01/2006

TEACHING COURSES
Scottish Graduate Programme in Economics: Advanced Topics in Macroeconomics
MSc in International Strategy and Economics: Regions and Global Cities
Senior Honours (Fourth Year) Level: Topics in Economic Theory - Macroeconomics, Contemporary Issues in Economics, Economic Policy
Second-Year Level: Quantitative Methods in Economics: Mathematics
First-Year Level: Macroeconomics, Microeconomics

RESEARCH INTERESTS
Macroeconomics with Imperfect Competition, Economic Dynamics, Heterogeneous Beliefs, Issues on Globalisation and Education.

A1D French Expert Group

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Ana de Medeiros**

Current Position: Head of French

Organisation: University of Kent

Qualifications: BA, MA, D.E.A., PhD

Brief Biography

EDUCATION
1987-1994: PhD in French Studies, Boston College (MA, USA)
1991-1992: DEA in French Studies, Université de Paris VII
1990-1992: Etudiant Etranger, Ecole Normale Supérieure, Paris
1986-1987: MA in French Studies, Middlebury College (VT, USA)
1982-1986: BA in Political Sciences and French, Boston College (MA, USA)

EMPLOYMENT
2003-present: Senior Lecturer in French, University of Kent
1996- 2003: Lecturer in French, University of Kent
1994-1996: Lecturer in French, University of Hull
1992-1993: Teaching Fellow in French, Boston University

ADMINISTRATION
Director of International Strategy for SECL (2007-)
European and Comparative Literary Studies MA director (1997-2006, 2007)
Head of French (2001-05, 2007-)
Admissions Officer for French (2001-05, 2007-)
Head of Languages and Literature Board (2003-05)
Senior Tutor for stage 1 for the School of European Culture and Languages (2005-06)
Director of Intercultural Relations MA for Transmanche University (2006-)
Director of Learning and Teaching for SECL (2006)
Member of Humanities Faculty Board (2002-)
Member of the University's European Task Force (2007-)
Member of QME Network (2005-)
Co-ordinator of French RAE (2006, 2007-08)
Probationary Mentor for two junior colleagues (2006-09)
Humanities Library Representative also SECL, LLB and French Library representative
Humanities Representative in University audit of Student Tutoring System
Member of University working party on Reducing Bureaucracy.
Member of Interview Committee for the posts of Chair of French, Head of SECL, 2 Lecturers in French, French Language Convenor and 2 Lecturers in Spanish
Erasmus exchange Coordinator for Paris III, Lille III Université Stendhal

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Alec Johns**

Current Position: Chair of Examiners for Modern Languages

Organisation: OCR

Qualifications: BA, Dip. Ed.

Brief Biography

A Spanish B.A. graduate of Durham University, Alec Johns taught for thirty years in comprehensive education in the UK.

Beginning in 1969, he has fulfilled almost every role in public exams work: setting, assessing and revising papers and syllabuses, moderating coursework, running teams of examiners and working in several roles with QCA.

He has published a small Spanish grammar, a book for breakthrough level languages as well as assessment material for various course books.

Presently he is responsible for the standards of all the modern languages exams offered by Cambridge Assessment's OCR and Asset Languages, and is working to develop their latest GCSE specification.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Geran Jones**

Current Position: Head of Department of Modern Languages

Organisation: Westminster School

Qualifications: M.A.

Brief Biography

Education

1982-83 Postgraduate Certificate in Education, King Alfred's College, Winchester

1977-81 M.A., University of St. Andrews

1970-77 Dr. Challoner's Grammar School, Amersham, Bucks

Employment

since 2000 Housemaster, Westminster School
since 1999 Head of Department of Modern Languages, Westminster School
1994 -1999 Head of German Department , Westminster School
1990-1993 Teacher of French, German and Russian, Westminster School
1983 -1990 Lancing College, Lancing, West Sussex
1981-82 Reinsurance Broker, Sten-Re (U.K.) Ltd

Examining Experience

since 2006 Consultant for Pre-U syllabus development then Chief Examiner (CIE)
2000- 2008 Senior Reviser, A Level French (OCR)
1998- 2005 Principal Examiner, A Level French (Edexcel)
1990 – 1998 Examiner then Team Leader, A Level French (Oxford Delegacy)

Sometime Language consultant for Cambridge University Press and Hugo Publishers

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Andy Martin**

Current Position: Lecturer in French

Organisation: Modern and Medieval Languages Faculty, Cambridge

Qualifications: BA, MA, PhD

Brief Biography

I have taught French language, with the emphasis on translation, and 'literature, history and thought' to undergraduates and postgraduates at Cambridge for a decade or two. I have experience in interviewing candidates for admission. I've recently returned from being a Visiting Scholar at Columbia and a Fellow at the Rutgers Center for Historical Analysis. I occasionally give extension classes at local schools. I am the author of, among other works, The Knowledge of Ignorance (CUP), Waiting for Bardot (Faber), Napoleon the Novelist (Polity), Stealing the Wave (Bloomsbury). I have a book coming out with Simon and Schuster in 2009, 'Beware Invisible Cows', on the search for ultimate truth, and am currently carrying out research for a book about the ideas of Jean-Paul Sartre and Albert Camus. I have considerable experience of broadcasting and journalism.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Guy Snaith**

Current Position: Lecturer in French

Organisation: University of Liverpool

Qualifications: BA, MA, PhD

Brief Biography

EDUCATION
1983 Ph.D., Jesus College, University of Cambridge
1973 Certificat d'études françaises, Institut de Touraine, Tours, France.
1972 M.A., University of Toronto.
1971 B.A., Victoria College, University of Toronto.

EMPLOYMENT
1980- Lecturer, Department of French, University of Liverpool
Areas of Teaching: French Theatre, 16th-20th centuries; 17th-century French Literature; French Canada, French Language.

ADMINISTRATION
CURRENTLY:
Senior Tutor for the School of Cultures, Languages and Area Studies
Director of Admissions for SOCLAS
Careers and Employability Officer for SOCLAS
Peer Reviewer
Personal Tutor

PREVIOUSLY:
Sub-Dean for Admissions for the Faculty of Arts (2003-06)
Member of Learning and Teaching Committee, SOCLAS
Acting Head of French Section, SOCLAS (2006)
Director of Studies for Single Honours French
French Research Seminar Coordinator
Sydney Jones Lectureship Committee
Theatre Users Committee
Faculty Library Committee
Board of College Studies: Subject Panel for French
Year 1 Tutor for French
Year 4 Tutor for French
Art Officer for French
French Vacation and Field Study Grants
Convenor of the Board of French Studies
Convenor of the Board of Modern Languages

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Jane Webber**

Current Position: Group Manager, Languages and Performing Arts

Organisation: University of Cambridge International Examinations

Qualifications: BA Hons French with History; MA Applied Linguistics (Second language teaching and learning), Open University Diploma in German

Brief Biography

Involved with Examinations and Assessment since 1974, first working with the London Board (now Edexcel) and then with Cambridge from 1981. MFL committee member at SEAC, developed a number of revisions of National Criteria for Languages up to and including those for Curriculum 2000. Also QCA committee member with regard to Quality of Language assessment throughout the curriculum at GCE and GCSE. Whilst at the London board I was involved with the running of about 50 Mode 3 O and A Level papers. Subsequent to moving to UCLES, I developed and ran GCSE syllabuses in Languages for MEG and A Level syllabuses. During this period I taught evening classes in French.

Since the formation of CIE in1998, I have been Group Manager for the Languages and Performing Arts group, which has 9 Product Managers and administrative support. We look after syllabuses for a very varied worldwide audience in about 50 languages and Drama, Music and Art and Design. My role in CIE also includes activities relating to Electronic Script Management, Fees and am Assessment contact for Mauritius.

A1E Mathematics Expert Group

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Dr. Nigel Backhouse**

Current Position: Retired

Organisation:

Qualifications: MA D.Phil

Brief Biography

Education: 1959-64 St. Paul's School, London
1964-69 Jesus College, Oxford
1969-79 Wolfson College, Oxford
Qualifications: 1967 BA (1st class in Mathematics)
1968 Diploma in Advanced Mathematics
1971 MA, D.Phil
Employment: 1962(Summer) Programmer in Maths Research Dept., BICC
1970-80 Lecturer in Applied Maths, University of Liverpool
1980-2003 Senior Lecturer in Applied Maths, University of Liverpool
2003(Summer) Temporary Maths Teacher, Winchester College
2003-5 Teacher of Maths, The Portsmouth Grammar School
2005 Temporary Maths Teacher, Marlborough College
Relevant Responsibilities: President, Liverpool Mathematical Society(1981/2)
Examinations Tutor(various dates); Chairman of the Board of Studies in Mathematical Studies and Computing (2000-3), duties included admissions and chairing examiners' meetings. (University of Liverpool)
Assistant examiner for World Class Tests and A-Level (AQA, 2001-)
Deputy Chief Examiner for Higher Level Mathematics (International Baccalaureate, 2005-)
Chief Examiner for Cambridge Pre-U Mathematics, 2007-

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Dr Sally Barton**

Current Position: Teaching Officer

Organisation: The University of Nottingham

Qualifications: PhD, PGCE, Diploma in Counselling

Brief Biography

Nine years spent at Nottingham University including PhD in Mathematical Logic and 2 years Post Doc with the Statistics group.
1983 – 1987 Open University Mathematics Tutor (M381-6)

Three years as a Systems Analyst with London Transport followed by ten years in Africa including administering 4 health centres.

1999-2003 Research Fellow in the Pathology Dept at QMC Nottingham responsible for datahandling and statistics.

PGCE 2003 followed by teaching in 2 secondary schools and since 2004 at Regent 6th form College Leicester. In 2006-7 member of ESRC & BERA funded seminar series looking at Mathematical Relationships, Identities and Participation.

Appointed as Teaching Officer at Nottingham in 2007.

Currently Vice Chair of NANAMIC (National association of Numeracy and Mathematics in Colleges)
Member of the Joint Mathematics Council, JMC, and the QCA 14-19 advisory group.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Neil Buckley**

Current Position: Chair of Examiners for Mathematics GCE for AQA. Chair of Examiners for Statistics GCE for AQA

Organisation: AQA

Qualifications: BSc Hons 2(1) in Mathematics, University of Manchester 1970. PGCE in Mathematics, Leicester School of Education in Leicester University 1971

Brief Biography

Examining Experience
1973 Chief Examiner for GCE O'level Computer Studies Pilot NEAB
1974 - 1978 Examiner for GCE O'Level Mathematics Syllabus B (termed 'modern maths' in those days) NEAB
1979 - 1983 Examiner for GCE A'Level Mathematics Syllabus B (very definitely 'modern maths' including some topics formerly at degree level in content) NEAB.
1984 -1985 Examiner for GCE A'Level Applied Mathematics after a rationalisation of syllabuses (Pure Maths paper - the 79-83 paper had a mixture of 'pure', algebraic structure, mechanics and statistics and probability) NEAB.
1986 - 1987 Senior Examiner for GCE A'Level Applied Mathematics - reviewing borderline candidates and advising etc. NEAB.
1988 - 1994 Chief Examiner for Further Mathematics Mechanics - setting the questions and taking the process through to grade boundaries and review. NEAB
1995 - 2000 Chair of Examiners A'Level Mathematics NEAB - linear and modular systems. Maintaining standards across linear and modular systems (including through common questions), from session to session and across different routes to a qualification within a specification. Chair of Examiners for A'Level Statistics NEAB.
2000 - 2004 Chair of Examiners for GCE Mathematics and Statistics AQA. Responsibilities including bringing NEAB, AEB and SMP 16-19 into one system.
2004 - present Chair of Examiners for GCE Mathematics AQA. Chair of Examiners for GCE Statistics AQA.
2008 - present Chair of Examiners for GCE Mathematics AQA QCA Pilot Maths Pathways to explore 'proof' and 'stretch and challenge' issues at GCE level.

Other Developments
June 2003 - Awarded MBE in Queen's Birthday Honours List for Services to Education.
Member of the Institute of Educational Assessors

Career
1959 - 1967 West Leeds Boys' High School - a boys' state grammar school.
1971 - 1978 Mathematics teacher at Burnage High School Manchester
1978 - 2006 Senior Teacher, Head of Maths, ICT teacher, Guthlaxton College, Leics 14 18 comprehensive

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Christopher Coles**

Current Position: Senior Lecturer - Mathematics

Organisation: University of Strathclyde

Qualifications: BA, DPhil in Mathematics

Brief Biography

Schooling: A Levels taken at Cambridge Grammar School for Boys in 1966

University: Mathematics degree followed by a PhD in Mathematics from York 1966-72

I have been a member of the lecturing staff at Strathclyde since 1972 teaching at all levels on undergraduate and postgraduate programmes. I am also currently the Department's Undergraduate Director and have been responsible for the academic selection of students for places on our portfolio of degree courses since 1988.

I have also taught mathematics to Higher / A Level standard on pre-university courses for international students and also on the University's pre-entry Summer School aimed at potential students who had either old or insufficient qualifications for immediate entry.

I serve as a member of the University Senate's Student Recruitment Group which looks at University wide issues of recruitment.

I have contacts with colleagues at European universities who participate in shared degree programmes in Industrial Mathematics now being aligned to Bologna.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Jonathan Robbins**

Current Position: Reader in Applied Mathematics

Organisation: University of Bristol

Qualifications: BS, Mathematics and Physics; PhD, Physics; teaching university mathematics since 1993; Admissions tutor in Department of Mathematics since 2006

Brief Biography

Education:
BS, Mathematics and Physics, Yale University, 1983
PhD in theoretical physics, University of California, Berkeley, 1989

Professional History:
Postdoctoral Researcher, Department of Physics, University of Bristol, 1989 - 93
Lecturer, Department of Mathematics and Statistics, University of Edinburgh, 1993 - 94
Lecturer, Department of Mathematics, University of Bristol, 1994-98
Reader, Department of Mathematics, University of Bristol, 1998-present

From 1994 through 2001, I held a joint appointment in the Basic Research Institute in the Mathematics Sciences at Hewlett-Packard Laboratories, Bristol.

I have lectured to undergraduate students in mathematics and related disciplines of all levels as well as to postgraduates, and have introduced new several modules in the Department of Mathematics. I also give tutorials to first-year maths undergraduates.

I was External Examiner at the National University of Ireland, Maynooth, Department of Mathematical Physics, from 2003 - 2007. I was External Examiner and Course Consultant in the Department of Mathematics at the Open University, 2002 - 2008.

Since 2006 I have been Admissions Tutor in the Department of Mathematics, with responsibility for setting admissions criteria, assessing applications and deciding on offers.

My research has been in several fields, including mathematical physics (quantum mechanics, quantum chaos) and liquid crystals. I have about 50 research publications, and am a member of the Advisory Panel of Journal of Physics A.

UCAS COMPARABILITY STUDY

Outline Biography of Expert Group Member

Name: **Amanda Radford**

Current Position: Product Manager (Maths, Science and Technical Subjects Group)

Organisation: Cambridge International Examinations

Qualifications: BA (Hons), PGCE

Brief Biography

Responsibilities - managing all aspects of the assessment process for a syllabus portfolio of Maths and Science subjects, and managing the development of syllabuses and support materials.
OCR Subject Officer (Maths GCSE) for 5 years prior to joining CIE.
Previously Maths teacher (11-18).

APPENDIX 2 - THE EVIDENCE CONSIDERED

Syllabus and specification

Each subject group were provided with an overview of the Pre-U Diploma along with subject specific evidence as highlighted below:

Pre-U Biology	Edexcel GCE Biology A Level
Syllabus	Specification
Sample Assessment Materials	Sample Assessment Materials Internal Assessment Guidance

Pre-U Economics	AQA GCE Economics A Level
Syllabus	Specification
Sample Assessment Materials	Specimen Mark Scheme Specimen Question Papers

Pre-U (MFL) French Principal Learning	Pre-U MFL (French) Short Course	OCR GCE MFL (French) A Level
Syllabus	Syllabus	Specification
Specimen Question Paper	Specimen Papers and Mark Scheme	Sample Assessment Material

Pre-U Mathematics	AQA GCE Mathematics A Level
Syllabus	Specification
Sample Assessment Materials	Specimen Mark Scheme Specimen Question Papers

Pre-U Global Perspectives and Independent Research Report	AQA GCE General Studies A Level	AQA Extended Project Qualification
Syllabus	Specification	Specification
Specimen Question Papers Specimen Mark Schemes	Specimen Question Papers Specimen Mark Schemes	November 2007 Examination Report