Provider Readiness Report

PRACTICAL INSIGHTS AND GUIDANCE

FOR DELIVERING APPRENTICESHIP STANDARDS

Network Engineer
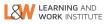
Leading Partner:

association of employment
and learning providers

Strategic Partners:

SDN
The Strategic Development Network

A&C Association of Colleges
Promoting, Representing, Supporting,

COLLABGROUP
Together Today for the Skills of Tomorrow

Federation for
Industry Sector
Skills & Standards

L&W LEARNING AND
WORK INSTITUTE

HOLEX

ASPIRE
LEARNING +
DEVELOPMENT

CAMBRIDGE ASSESSMENT

City&
Guilds

FAB Federation of
Awarding Bodies

Pearson

UCL
Institute of Education

UVAC
UNIVERSITY VOCATIONAL
AWARDS COUNCIL

Provider Readiness Report – Network Engineer (Level 4)

Introduction:

Provider Readiness Reports are delivery guidance documents for an apprenticeship standard. They are created by training providers (including colleges, independent training providers, higher education institutions and others). The reports provide practical insights and guidance to help with planning for delivery and in negotiations with employers. They will help providers make decisions about the commitment of time and other resources required to train apprentices to meet the requirements of the new standards.

Standard	**Link to standard** **This report relates to version 2 of the Network Engineer published in Feb 2016.**
Assessment Plan (end point)	**Link to assessment plan**
Organisations involved with the development of the standard for Network Engineer	IBM, Accenture, BA, BT, Capgemini, Cisco, Fujitsu, HP, John Lewis, Lloyds, Microsoft, NCA, The Royal Signals, Telefonica, The Test, Factory, Virgin Media, Visa, BCS - Chartered Institute of IT
SASE Overlap	Higher Apprenticeship for IT, Software, Web and Telecoms Professionals
Mandatory Qualification(s) on standard	Apprentices must achieve one internationally recognised vendor or professional qualification, which then exempts one of the Ofqual regulated knowledge modules. The detail of both the knowledge modules and vendor/professional qualification can be found in the on-programme section of this report
Additional optional qualifications recommended by the trailblazer group.	N/A
Maximum Core Government Contribution (CGC) , subject to employer contribution (15/16 & 16/17)	£18000 maximum CGC, subject to employer £9000 contribution. The price of on-programme training and end-point assessment is subject to employer/provider negotiation and may be higher or lower than combined values above; where higher the maximum CGC remains the same and the employer would need to pay the difference in full. The employer may be eligible for incentive payments which they can use as they wish. See current funding rules for further guidance.
Anticipated Volume	To be confirmed once the new assessment plan is published
Level	4

English and Maths Requirements	For Level 3 to 7 apprenticeships, apprentices must achieve Level 2 English and maths prior to taking their end-point assessment (EPA). Apprentices must start English and maths at Level 2, unless the provider has conducted a formal, recognised assessment that demonstrates they need to study at Level 1 first in order to successfully achieve their Level 2. SFA provides a flat rate for English and maths up to Level 2 as part of an approved apprenticeship standard. Employers will not need to make an employer contribution. See current funding rules for further guidance.
End-point assessment Methods	The assessment plan published on gov.uk was last updated on 11/02/16. It has three components to the EPA: • Summative project • Synoptic project • Interview An updated assessment plan is due to be published and will include an employer reference as a fourth component. The grading criteria for this standard is pass, merit and distinction.

Supporting Information and Glossary of Terms

Assessment Role	Notes
Employer	Supports the apprentice in the workplace, may provide training, coaching or mentoring.
Training Provider	Employers wishing to access funding must appoint an SFA approved lead provider via the Register of Training Organisations (ROTO) https://www.gov.uk/government/publications/register-of-training-organisations Employers may choose to engage with one or more providers to deliver the on programme training. Providers wishing to deliver on-programme delivery must registered and be approved on the, Register of Apprenticeship Training Providers (RoATP). Also providers who wish to deliver to employers without a digital account, must register and be approved on the Invitation to Tender (ITT). Please follow the link for further information. https://www.gov.uk/government/collections/register-of-apprenticeship-training-providers
EPA Organisation	Employers must select an EPA organisation from the SFA Register of Apprentice Assessment Organisations (RoAAO), approved to deliver this particular standard: https://www.gov.uk/government/publications/register-of-apprentice-assessment-organisations

Term	General Definition within Trailblazers
On-programme	This is the period from start until the EPA gateway is met. Apprentices require a minimum period of 12 months on-programme training, with 20% off-the-job training prior to taking the EPA, to meet funding eligibility requirements. It will include training to develop the knowledge, skills and behaviours (KSBs) detailed on the standard and completion of any mandated qualifications, including English and maths where required. Preparation for the EPA should be completed in this phase. This is an area of significant interest for apprenticeship training providers.
Gateway	Any requirements that must be completed/achieved as a pre-requisite to undertaking the EPA are termed the gateway. For example, English and maths minimum requirements. The gateway components are therefore the key outputs of the on-programme training period. For this standard, this includes the mandated knowledge modules/vendor qualifications and a series of work based projects which support the development of the summative portfolio.
Trainer	The term trainer is commonly used in relation to roles within the on-programme period. A trainer may be appointed by the employer or training providers to deliver some or all parts of the on-programme phase of training. This includes delivering any mandated qualifications, preparation for the EPA and all gateway components. The trainer has no status within the EPA, unless specifically referenced and approved within the assessment plan (for example being a

	signatory to a portfolio or a panel interview).
Independent Assessor	Individuals involved in administering and delivering the EPA are commonly termed the assessor, end-point assessor or independent assessor and must be appointed by an approved EPA organisation.

Themes	Considerations /Implications for Delivery	Resources
On programme components: *to develop the skills, knowledge and behaviours detailed on the standard and to prepare apprentices for EPA*	This apprenticeship is suitable for learners in a digital industry role in occupations such as network technician, network engineer, systems engineer and network administrator. Individual employers will set the selection criteria but this is likely to include a Level 3 qualification or the equivalent level of experience. There is no reference to a minimum age requirement. The duration of this apprenticeship is typically 24 months (as defined in the standard). The providers in the group believe that delivery in less time would put the quality of provision at risk due to the in-depth nature of the KSB requirements, unless prior learning is taken into account. As with all apprenticeship standards, there is a requirement for 20% off-the-job training for 12 months prior to taking the EPA to meet funding eligibility requirements. Level 2 English and maths will need to be achieved for this standard, if not already achieved, prior to taking the EPA. The on-programme element of the apprenticeship will include training and formative assessment to develop the KSBs detailed on the standard. Assessment will be through a combination of Ofqual regulated knowledge modules and vendor/professional qualifications which need to be achieved prior to EPA taking place. Preparation for the EPA should be completed and therefore factored into the individual learning plan. Apprentices must achieve one internationally recognised vendor or professional qualification from the right hand column in the table below. This then exempts one of the Ofqual regulated knowledge modules, as shown in the left hand column. | Knowledge Modules	Vendor or Professional Qualifications
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Knowledge Module 1: Network Principles (for Level 4 Network Engineer Apprenticeship)	CCNA 1 + 2 Network + Juniper JNCIA - Junus
Knowledge Module 2: Network Systems and Architecture (for level 4 Network Engineer Apprenticeship)	MCP Server Virtualisation – Windows Server Hyper V MCP MS Exchange Server MCP Server 2012 MCP Windows Administrator Server + Juniper JNCIS - Ent Knowledge		The Standard The Assessment Plan SFA funding guidance: Apprenticeship standards quality statement Embedded functional skills materials Register of Training Organisations (ROTO) https://www.gov.uk/government/collections/sfa-register-of-training-organisations https://certification.comptia.org/certifications/network https://certification.comptia.org/certifications/server https://certification.comptia.org/certifications/security http://www.cisco.com/c/en/us/training-events/training-certifications/certifications/associate/ccna-routing-switching.html https://learningnetwork.cisco.com/community/certifications/security_ccna

Themes	Considerations /Implications for Delivery		Resources
	Network Security (for level 4 Network Engineer Apprenticeship)	Security + CCNA Security MTA Cloud and Mobility Juniper JNCIS – Sec	http://www.juniper.net/uk/en/training/certification/certification-tracks/junos-intro-track/

The centre specifications from the awarding bodies for the knowledge modules are currently in the process of being finalised and registered with Ofqual. For example, the specification for knowledge module one is available from OCR on their website and City and Guilds can share the drafts with any provider who is looking to deliver them. Once published, they will be available on their respective websites. There is an intention to have the knowledge modules and centre approval processes underway from June 2016. An apprentice can be registered with one awarding body for the on-programme Ofqual knowledge modules and a different assessment organisation for EPA, even if a single organisation offers both.

Depending on the modules or vendor qualifications chosen by the employers, providers will need to identify any resulting gaps in KSBs and develop a robust ILP with the employer, to ensure all requirements of the standard are covered. This is most likely, for example, with the behaviour expectations.

Providers noted that there appears to be limited flexibility with the standard for employers to deliver the on-programme knowledge and skills training, if the proposed knowledge modules cover all of the knowledge and skills required for this standard. The exception to this is employers who are registered as centres with the associated awarding bodies in their own right.

At the time of writing the Tech Partnership has not as yet published the associated occupational brief for this standard. This document will be of significant interest to providers and assessment organisations, as it provides a further level of detail for the requirements of delivering and assessing a successful apprentice in this occupation. It will be published on the Tech Partnership website when it is available.

The choice over which vendor qualification is most appropriate to substitute with one of the knowledge modules will be driven by the employer.

The vendor options provide the apprentice with a credible qualification that will be highly applicable for many employers, and there are wider benefits associated with a relationship with individual vendors. The PRG members have requested clarity as to

Resources:

http://www.juniper.net/uk/en/training/certification/certification-tracks/junos-security-track/

https://www.microsoft.com/en-gb/learning/mta-certification.aspx

https://www.microsoft.com/en-gb/learning/microsoft-certified-professional.aspx

Themes	Considerations /Implications for Delivery	Resources
	whether or not an employer can ask for more than one knowledge module to be substituted with multiple vendor qualifications. Delivering more than one will be more costly than delivering the knowledge modules, may not provide a broader knowledge base and may not be feasible for many providers. Training providers can play a key role in supporting the employer in this decision making process where needed. This would not only include discussing the apprentice's current role but also their future career plans. Providers will need to give clear, up to date information on the costs for both knowledge modules and associated vendor qualifications. Training providers on the PRG expressed the need for specialism in their own delivery and will likely limit the vendor qualifications they choose to offer, to ensure their apprenticeship offer is manageable and cost effective. This will vary from provider to provider and will have a direct impact on the employers they seek to work with in delivering apprenticeships. Apprentices will be required to undertake work based projects during the on-programme phase of this apprenticeship. This is a critical activity that must be factored into the ILP, as a summation of the projects (a 'Summative Portfolio') will be formally assessed as part of the EPA. The PRG members would welcome guidance for providers from the assessment organisations/Tech Partnership on appropriate projects, that can be undertaken as soon as is possible, to allow them to build programmes and register apprentices.	
Delivery models/ Infrastructure: *the drive towards effective competence-based and situational training*	As the assessment plan is being reviewed and the knowledge modules are only just being made available, it is very early in the process of the PRG members determining their future delivery models. They have identified the following for consideration by any provider looking to deliver the standard in future: 1) The majority of PRG members felt that this standard could not be delivered in a 100% work based, 1-1 model to maintain a high quality delivery model. There would be a requirement for some classroom based (virtual or actual) delivery, to provide the depth of subject learning needed to progress to the EPA gateway. 2) All providers could see that daily/weekly/block release is likely to be feasible with this standard, and this will depend on what is required by the employer as well as being realistic on behalf of the provider. A college, for example, has apprentices attending evening courses as a result of negotiation with the employer and	The Standard The Assessment Plan The employer brief (under development) to accompany the plan will provide description of high level learning outcomes to support employers and providers to prepare apprentices for assessment

Themes	Considerations /Implications for Delivery	Resources
	apprentice for particular modules. 3) Providers for this standard are encouraged to look at technology enhanced learning opportunities as part of their delivery model. This includes, for example, technologies such as Google Classroom to bring learners from different employers together. The design of learning and using such tools is different to traditional classroom based learning and providers should ensure their staff are suitably skilled to design and deliver online learning of this nature. 4) There is recognition, as referred to in the previous section, that the teaching, learning and formative assessment requirements may be broader than the mandated qualifications. This needs a provider to work from the standard and build a robust ILP, with the employer, that allows all aspects to be covered. It should also take into account the grading expectations. 5) Delivering and evidencing behavioural based training and observation is a feature of on-programme delivery, either through the employer's in-house training and performance management or delivering behavioural based training to apprentices. Providers may choose, for example, to deliver generic behavioural based training for multiple learners that are common to more than one standard, to create economies of scale and ensure the cost is manageable. 6) For many providers, a decision will be made to specialise in a particular vendor qualification rather than try to deliver all elements. The rationale for this is the specialism required from staff and the cost of any associated licences/resources from the various vendors. 7) It is also recognised that in order to deliver the breadth of the standard, partnership arrangements between providers are a worthwhile strategic consideration to meet the expectations of employers.	

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Resources: *materials/ resources/ equipment*	It is recognised that providers may need to invest in appropriate resources to meet the needs of the new knowledge modules and more so the vendor/professional qualification content. Further guidance is requested from the Tech Partnership/assessment organisations on the appropriate use of simulation and virtualisation software, such as Packet Tracker, as an alternative to actual equipment. At this stage the following resources should be considered as part of training provider's planning for delivery of this standard: • Software/hardware as specified for the vendor qualifications they are to deliver. Materials lists are provided for all vendor qualifications and can be found on their websites (links in earlier section). It will be important that apprentices are able to gain practical hands on experience with this equipment, rather than just simulation. • In order to meet the requirements of a summative portfolio, it is recommended that learners have access to an online tool which allows them to capture their learning activity, for example, "Captured" or "Google Classroom". Providers should discuss the appropriate use of an existing e-portfolio solution with their supplier, alongside the plans from awarding body/assessment organisation. • Resource requirements specifically for the EPA require further clarification. Questions related to this can be found in the section on EPA.	
Staffing: *Staff qualifications and skills needed*	PRG members recognise that to deliver this apprenticeship standard, up skilling of staff will be required. As a basis, this will be to update them on the changes from any current apprenticeship framework delivery to the detail and expectations of the new standard, including EPA and grading. Ensuring provider staff are appropriately qualified to deliver relevant knowledge modules and vendor/professional qualifications is important, as is the need for ensuring delivery staff have regular industry update opportunities due to the dynamic nature of this occupational area. It may need to be taken into account that an increase in skill requirement could have a direct effect on the salary/cost of the trainer being used, which needs to be factored into any costing/pricing model. Where external contractors are used to deliver specialist knowledge elements, the requirement for robust internal quality assurance remains crucial.	

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	Vendor requirements for trainer qualifications vary and therefore could have a bearing on either; a) the qualifications a provider chooses to offer, b) staffing strategy to cover specialist units. A centre approval process will be in place for delivery of the on-programme Ofqual knowledge modules with the awarding bodies and will specify the level of qualifications and experience required by trainers as is the norm for qualifications.	
Costing: *costs associated with the resources*	It is too early in the development stage of this standard for providers to determine costing models in any level of detail which can be shared. However, determining potential cost of delivery and an associated pricing model is a critical step in delivery of the new standards. The current cap allocation for this standard is reflective of the investment required in resources, skills, infrastructure, on-programme qualifications and a robust EPA approach. As already stated, the PRG recognises that for many providers, limiting their offer to employers will be required to make this a realistic and viable standard and enable them to deliver a high quality apprenticeship. In determining this, the PRG noted the following costs that will need to be considered; • Costs for multiple vendor trainer qualifications • Some vendors will require a license per site • Educational discounts may be available for FE Colleges/not for profit organisations, but not for independent training providers • VAT will affect the cost model of independent training providers due to the requirement of VAT within the service delivery • The cost of the various vendor exams will need to be factored into any delivery; these typically fluctuate drastically and what one vendor charges for examinations will differ from another • The resit cost will need to be determined, agreed and factored into the initial contract with the employer. Further detail on policy is available in the funding guide. • Understanding the funding regulations in relation to an apprentice leaving an employer; further detail on policy is available in the funding guide. • Actual cost to deliver the EPA due to the various technologies that might be implemented for each vendor path chosen	SFA funding guidance FA website example contracts, costings for on-programme activity

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	In addition, providers may want to capture and consider the broader set up costs for moving to the new standard, which cannot be covered in the price agreed with the employer. Examples of this are: • Legal costs for new contractual agreements • Marketing • Staff training time into new systems. Whilst EPA organisations have not published their proposed prices for EPA at the time of writing, they are open to individual approaches from providers to discuss potential pricing in order to support training providers move forward with their plans for delivery.	
Marketing /Communication: *promoting the offer to employers/ apprentices*	At this stage in the development of these new standards, PRG members plan to raise awareness with employers and apprentices, about the changes to the content and use this as an early opportunity to gather intelligence from existing and prospective clients and apprentices. This market research will help inform decisions on, for example, the vendor qualifications providers will choose to offer to meet local/national needs, in accordance with their existing or planned footprint. Marketing support will continue to be useful from the Tech Partnership (already underway via website and social media) to help to promote the standards. We would recommend providers look at available information on the apprenticeships government web pages and the toolkit available on the future apprenticeships portal. Marketing material relevant to the new apprenticeships may be available from the associated vendors and should be discussed by providers with them directly. It is possible to deliver against this new standard at the time of writing however, providers may prefer to wait until the revised standard and assessment plan is available and further detail emerges regarding the practical approaches being taken by the assessment organisations about EPA.	BIS/NAS materials Future Apprenticeships portal Future Apprenticeship provider toolkit
End Point Assessment:	**The published assessment plan for this standard is in the process of being revised with the most recent update on 11/02/16.** The PRG has raised the question as to how changes to standards and assessment plans will be version controlled and archived and would welcome an input from BIS representatives on this. Assessment organisations for this standard are in place and currently developing their	The Assessment Plan RoAAO

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	approach to EPA. They are in ongoing dialogue with one another, the employer group and the PRG.	

The apprenticeship is typically 24 months. This gives flexibility for an apprentice to progress through the EPA gateway before 24 months at the discretion of the employer, training provider and apprentice, if they consider them to be ready to do so. The Government requirement is for at least 12 months of on-programme learning to take place. Whilst there is no hard rule to determine when an apprentice should move to EPA, this is a detailed programme of learning and it would be unusual for an apprentice to be ready to progress at the 12 month point and successfully pass the EPA.

Based on the published assessment plan there are three components to EPA outlined on the published assessment plan. It is the understanding of the PRG that the new revised version will include a fourth component; an employer reference:

1) Summative portfolio; provides evidence against the standard, captured as an outcome of the on-programme real work projects

2) Synoptic project; gives the apprentice the opportunity to undertake a business related project, over a five day period, away from their normal workplace

3) Structured interview; will take place with an independent assessor and explore the content of the portfolio and the synoptic project in further detail

4) Employer reference; provides the employer's perspective on how the apprentice has performed in the work place and the application of the KSBs in the standard.

   N.B. this component is not present in the published assessment plan as at 01/05/16. For apprentices who have started on this standard prior to the new plan being published, the PRG has asked if the Tech Partnership or BIS can clarify if it can be assumed that this component will not apply.

All EPA components will be uploaded or undertaken in a virtual environment (including the interview). This environment is currently under development by the assessment organisations. The assessment organisations which have spoken with the PRG have advised they are very open to discussing progress and proposed dates for launch of this, with any providers who are looking to plan delivery of this standard.

The independent assessor will holistically grade all components of the EPA and determine an overall grade as pass, merit or distinction. As there is only one grade given

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	covering all components, if an apprentice fails they will need to resubmit all elements of the EPA. The assessment organisations have confirmed robust feedback will be provided to allow an apprentice, employer and training provider to a) resubmit any work that is deemed to be of a high quality or b) identify where further work is needed to successfully pass the apprenticeship.	
	The assessment organisations have a number of questions which they are in ongoing discussion about, with the Tech Partnership, in regards to EPA. There is an intention to publish example synoptic projects in 16/17. City and Guilds and OCR have advised the PRG that costings and further information will emerge from June 2016 onwards. This report will be updated to provide this information as it emerges.	
	Questions which have been fed back to the assessment organisations at this stage are:	
	Can the synoptic project be done using virtual labs?	
	The assessment plan states that "at least half the projects will be available to complete online". However, it also states that the learner will need "access to the required equipment". Clarification is needed; but it may be that relevant equipment and software will be required at the location of the synoptic project, depending on the project requirements.	
	Where will the synoptic project take place?	
	The assessment plan states that it will be on the employer's premises or the training provider's premises. Whichever organisation this takes place at, clarity is needed on the nature of a "controlled environment".	
	Does the synoptic project need to take place over five consecutive days?	
	It is the PRG's understanding that it must be five consecutive days or 35 hours. Where the assessment day is longer than 5 hours, then the second timing will kick in. It can be taken over two weeks with a weekend in the middle, for example, it could be Wednesday to Friday and then Monday to Tuesday or similar combinations. It cannot be done as a day release model.	
	Will the learner require access to the internet (open book) during the synoptic assessment?	
	The assessment organisations the PRG consulted , recognised the need for highly skilled independent assessors to fulfil the requirements of EPA and will determine their	

Themes	Considerations /Implications for Delivery	Resources
	recruitment and selection in accordance with this. Current industry experience and qualifications at a level which are appropriate to take into account the vendor aspect of the apprenticeship are factored into this. Both City and Guilds and OCR (it can be assumed other assessment organisations will operate in the same way) welcome provider involvement in developing their plans and continue an open dialogue with the PRG. Standardisation of approach between the assessment organisations has been a feature of the Tech Partnerships approach to date and remains the intention going forward. The new assessment plan will outline the details of external quality assurance as is the requirement of all assessment plans.	
Managing relationships with Employer and Apprentices: *employer/ provider/ apprentice contracts*	The PRG envisage the following to be key in managing the relationship with employers: • Working towards a partnership approach with employers; recognising that different models are likely to emerge. Providing clarity for them on what can be delivered by the employer and what can be delivered by the training provider. Managing the delivery through a robust ILP. • Ensuring an employer understands the minimum entry requirements for the standard and the implications should an employer look to operate to higher minimum entry • Providing clear information on the services training providers can offer and the benefit of utilising them e.g. recruitment • Robust advice and guidance to help employers choose the best on-programme components for their apprentice(s) • Clear pricing information in support of this to help decision making process • Contracts that explicitly outline the nature of the relationship throughout the apprentice's journey, pricing and payment schedules (an example of a contract used by a provider is available in the Future Apprenticeships toolkit) • Ensuring employers are clear on the time commitment for the apprentice being away from their day to day role, both on programme and as part of the EPA • Explaining the role of the assessment organisations and their interaction with the apprentice and employer (information from the awarding organisations to inform	SFA funding guidance Future Apprenticeships portal Future Apprenticeship provider toolkit

Themes	Considerations /Implications for Delivery	Resources
	this would be helpful)	
	Managing relationships with apprentices:	
	• This is broadly considered to be business as usual for providers who already focus on managing the apprentice through their journey.	
	• A robust approach to initial assessment to meet minimum requirements and advice and guidance is crucial	
	• Ensuring the apprentice understands the different roles and responsibilities of the employer, training provider and assessment organisation	
	• Understanding the implications of grading and the expected requirements for achieving pass, merit or distinction	
	• Providing robust feedback throughout the programme to demonstrate progress towards the EPA gateway	
Sub-Contracting relationships: *Lead provider role and potential for collaboration on apprenticeship delivery*	The PRG can see potential for partnerships between providers playing a key role in the successful implementation of these standards. Examples of this may be as a result of learners not being able to meet minimum requirements and the training provider offering alternative provision to help them meet these e.g. standalone English and maths or traineeships. It could also be to manage the range of vendor/professional qualifications on offer to meet the needs of employers. More clarity is needed on the future of subcontracting within apprenticeship delivery and the implications of changes to the "register of training organisations" as it becomes available.	SFA funding guidance
Progression: *Professional registration*	This apprenticeship is recognised for entry onto the Register of IT Technicians, confirming SFIA Level 3 professional competence and those completing the apprenticeship are eligible to apply for registration. There is the opportunity to progress to the Digital & Technology Solutions BSc (Hons) degree. Clarity is needed on the stepping on point for this degree for apprentices who have successfully completed a Level 4 apprenticeship.	