Institute for Apprenticeships & Technical Education

Higher technical qualification submission form

Awarding body information

Awarding body information

What is the name of the awarding body?
Lancaster University - Delivered solely by Blackpool and The Fylde College (OfS Registration number below is that of B&FC)

Is the awarding body a higher education provider?
Yes

Is the awarding body on the Office for Students register?
Yes

Qualification information

Qualification information

You can only submit one qualification for each form. If you are submitting multiple qualifications you must start a new form for each qualification. Please include the name of the qualification as it appears on Ofqual register or UCAS. Include the size of the qualification. e.g. award, certificate, diploma

What is the name of the qualification?
FdSc Network Engineering (Systems Administration)

Is the qualification on the Ofqual register?
No

If the qualification is not regulated by Ofqual, the organisation owning the qualification must be OfS regulated. This is typically the case of qualifications from Higher Education Providers. For organisations which are Ofqual regulated, the specific qualification must be on the Ofqual register for the application to be progressed. The form will not prevent continuing if this is not completed, but your application cannot be progressed by the approval managers following submission if the awarding organisation is regulated by Ofqual but the qualification is not.

What is the level of the qualification?
Level 5

Route and occupational standards

Route and occupational standards

Awarding bodies must demonstrate that a qualification will enable a person to demonstrate that they have

attained as many of the knowledge, skills and behaviours set out in the standard as may be reasonably expected by undertaking a course of education.

Please note:

- Qualifications will only be considered for approval against occupational standards approved by the Institute.

If qualifications have optional units or pathways, we will only approve qualifications where every possible combination of units/ pathways ensures that a learner achieves competence in at least one occupation for which there is a standard. Qualifications with optional units that do not ensure this should be redesigned or remove optional units that do not align to occupations.
Awarding bodies must fill out all sections of this form. They must also submit supporting documentation to provide evidence of the following:

- The content of the qualification (for example, the specification of content)
- Evidence of employer engagement in the development and validation of the qualification (for example this could be within the qualification design and validation documentation that was used through the development of the qualification which evidences where and how employers were involved)

Which route does the qualification fall under?
Digital

Which occupational standards are aligned to the qualification?
Network engineer/Level: 4

Attach documents

Please attach the following documents:

- The content of the qualification (for example, the specification of content)
- Evidence of employer engagement in the development and validation of the qualification (for example this could be within the qualification design and validation documentation that was used through the development of the qualification which evidences where and how employers were involved)

Network engineer

Knowledge, skills and behaviours coverage within the qualification

Please identify which knowledge, skill and behaviour statements from the occupational standard are covered within the qualification.

Where knowledge, skill and behaviour statements are covered, please provide a reference to the qualification content. This should be a unit or module reference along with associated page/paragraph/line numbers (as appropriate) in the attached specification. Please be as specific as possible which content in the qualification aligns to the statement in the standard.

Where knowledge, skill or behaviour statements are partially covered or not covered, you will be asked to provide a rationale for the exclusion of this content from the qualification. The employer engagement evidence provided should support this rationale.

The following questions assess how knowledge, skill and behaviour statements from the occupational standards are covered within the qualification.

This page has automatically generated an item for each knowledge, skill and behaviour statement (KSB) contained within the chosen standard. So please do not remove or add any further KSBs, as it requires the exact number.

KSBgenerator

KSB

KSB 1

K1 The causes and consequences of network and IT infrastructure failures.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?

Module:
NET405: Network Disaster Recovery

Covered in the indicative content and learning outcomes

KSB 2

K2 The architecture of typical IT systems, including hardware, OS, server, virtualisation, voice, cloud, and applications.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET402 Network Programming and Scripting Concepts
NET401 Networking Principles
NET502 Virtualisation and Cloud Computing

Covered in the indicative content and learning outcomes

KSB 3

K3 The techniques for systems performance and optimisation.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET522 Systems Configuration and Management

Covered in the indicative content and learning outcomes

KSB 4

K4 Diagnostic techniques and tools to interrogate and gather information regarding systems performance.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET404 Introduction to Systems Security
NET522 Systems Configuration and Management

Covered in the indicative content and learning outcomes

KSB 5

K5 Organizational procedures to deal with recording information effectively and in line with protocols.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET501 Project Management
NET522 Systems Configuration and Management

Covered in the indicative content and learning outcomes

KSB 6

K6 Service Level Agreements (SLAs) and their application to delivering network engineering activities in line with contractual obligations and customer service.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
Module:
NET405: Network Disaster Recovery

Covered in the indicative content and learning outcomes

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
Although not directly identified in the module learning outcome (below) SLAs are key to any discussions around their impact and relevance.

2 - Compare and contrast different Disaster Recovery strategies and evaluate the impact of approaches on an organisation

3 - Assess the effectiveness of current disaster recovery measures, analyze the risks and the recovery objectives for an organization in order to develop a disaster recovery strategy

As part of this learners explore the following of which feeds into SLA:

Disaster Recovery Plan
  - Common components / risk analysis / cost of hardware/software / procedures / processes
Disaster Recovery Strategies
  - Cost / legal issues / social impact

KSB 7

K7 Their role in Business Continuity and Disaster Recovery.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET405: Network Disaster Recovery

Covered in the indicative content and learning outcomes

KSB 8

K8 The purposes and uses of ports and protocols.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET402 Network Programming and Scripting Concepts
NET401 Networking Principles

Covered in the indicative content and learning outcomes

KSB 9

K9 Devices, applications, protocols, and services at their appropriate OSI and/or TCP/IP layers.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET401 Networking Principles

Covered in the indicative content and learning outcomes

KSB 10

K10 The concepts and characteristics of routing and switching.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content and learning outcomes

KSB 11

K11 The characteristics of network topologies, types, and technologies.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET401 Networking Principles

NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content and learning outcomes

KSB 12

K12 Wireless technologies and configurations.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET403 Introduction to Routing and Switching
NET521: LAN Technologies
NET523: Enterprise Network Technologies

Covered in the indicative content

KSB 13

K13 Cloud concepts and their purposes.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET502 Virtualisation and Cloud Computing

Covered in the indicative content and learning outcomes

KSB 14

K14 Functions of network services.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET522 Systems Configuration and Management

Covered in the indicative content and learning outcomes

KSB 15

K15 The different types of network maintenance.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content and learning outcomes

KSB 16

K16 How current legislation relates to or impacts occupation.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET405 Network Disaster Recovery

Covered in the indicative content and learning outcomes

KSB 17

K17 Troubleshooting methodologies for network and IT infrastructure.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content and learning outcomes

KSB 18

K18 How to integrate a server into a network.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET522 Systems Configuration and Management

Covered in the indicative content and learning outcome

KSB 19

K19 The types of security threats to networks and IT infrastructure assets.

Is the statement covered within the qualification?

Fully covered

Where within the qualification is the statement covered?
Module:
NET404 Introduction to Systems Security

Covered in the indicative content and learning outcome

KSB 20

K20 How to use tools to automate network tasks.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET402 Network Programming and Scripting Concepts

Covered in the indicative content and learning outcome

KSB 21

K21 Approaches to change management.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET501 Project Management

Covered in the indicative content and learning outcome

KSB 22

S1 Apply the appropriate tools and techniques when securely operating and testing Networks.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET404 Introduction to Systems Security

Covered in the indicative content and learning outcome

KSB 23

S2 Install and configure the elements required to maintain and manage a secure Network.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET404 Introduction to Systems Security

Covered in the indicative content and learning outcome

KSB 24

S3 Implement techniques to monitor and record systems performance in line with defined specifications.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET521 LAN Technologies
NET404 Introduction to Systems Security

Covered in the indicative content and learning outcome

KSB 25

S4 Maintain security and performance of the system against known and standard threats.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET404 Introduction to Systems Security

Covered in the indicative content and learning outcome

KSB 26

S5 Apply the appropriate tools and techniques to identify systems performance issues.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content and learning outcomes

KSB 27

S6 Apply the appropriate tools and techniques to gather information to troubleshoot issues and isolate, repair or escalate faults.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content and learning outcomes

KSB 28

S7 Communicate outcomes of tasks and record in line with organisational procedures and SLAs including adherence to good customer service standards.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
Module:
NET405 Network Disaster Recovery

Covered in the indicative content and learning outcomes

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
Although organisation procedures and SLAs are not specifically identified in the module due to the nature of the module it would be difficult to not discuss them.

KSB 29

S8 Upgrade, apply and test components to systems configurations ensuring that the system meets the organisation's requirements and minimises downtime. This should include backup processes.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET405 Network Disaster Recovery

Covered in the indicative content and learning outcomes

KSB 30

S9 Record task details whether face-to-face, remote or in writing in line with ogranisational requirements.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
Although not directly referenced as part of the programme students complete 96 hours work based placement and as such experience working in industry through help desk or network support (see letters of support from employers). As part of this they will be required record details and also create reflective logs for their placement hours.

KSB 31

S10 Interpret information received from a manager, customer or technical specialist and accurately implement the defined requirements.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content

KSB 32

S11 Monitor, identify and implement required maintenance procedures.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Modules:
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies

Covered in the indicative content

KSB 33

S12 Implement techniques to optimise systems performance in line with defined specifications.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
NET522: Systems Configuration and Management

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
Although listed as not directly covered, assessments will be issued relating to work based scenarios which will require students to implement and optimise system performance based on the assessment specifications in module

4 - Evaluate disk redundancy and apply disk performance monitoring tools and techniques

5 - Critically evaluate Storage Area Networks and access methods (iSCSI, fibre channel)

KSB 34

S13 Organise and prioritise clients/stakeholders' requests in line with SLAs and organization processes.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
Module:
NET405 Network Disaster Recovery

Covered in the indicative content and learning outcomes

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
The nature of this module lends itself to this requirement although it is not directly referenced

KSB 35

S14 Explain their job role within the business context to stakeholders to enable a clear understanding on both sides of what their remit is and convey technical constraints in appropriate language considering accessibility and diversity implications.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET501 Project Management
BFC501-I: Work Based and Placement Learning

Covered in the indicative content and learning outcomes

KSB 36

S15 Operate securely and apply the appropriate process, policies, and legislation within their business responsibilities.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?

Module:
NET404 Introduction to Systems Security
NET522: Systems Configuration and Management

Covered in the indicative content and learning outcomes

KSB 37

S16 Communicate with a range of stakeholders taking into consideration of organisations cultural awareness and technical ability.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

KSB 38

S17 Apply the appropriate level of responsibility when planning and prioritizing work tasks.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET501 Project Management

Covered in the indicative content and learning outcomes

KSB 39

S18 Apply the relevant numerical skills (Binary, dotted decimal notation) required to meet the defines specifications.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET401 Network Principles

Covered in the indicative content and learning outcomes

KSB 40

S19 Ensure compliance of network engineering outputs with change management processes.

Is the statement covered within the qualification?

Fully covered

Where within the qualification is the statement covered?
Module:
NET501 Project Management

Covered in the indicative content and learning outcomes

KSB 41

S20 Select the appropriate tools and comply with organisation policies and processes when upgrading systems.

Is the statement covered within the qualification?
Fully covered

Where within the qualification is the statement covered?
Module:
NET522 Systems Configuration and Management

Covered in the indicative content and learning outcomes

KSB 42

B1 Work independently and demonstrate initiative being resourceful when faced with a problem and taking responsibility for solving problems within their own remit.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
Although not directly referenced as part of the programme students complete 96 hours work based placement and as such experience problem solving in industry. As part of this they will be required record details and also create reflective logs for their placement hours.

KSB 43

B2 Work securely within the business.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

KSB 44

B3 Work within the goals, vision, and values of the organisation.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

KSB 45

B4 Take a wider view of the strategic objectives of the tasks/ projects they are working on including the implications for accessibility by users and diversity.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

KSB 46

B5 Works to meet or exceed customers' requirements and expectations.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

KSB 47

B6 Identifies issues quickly, investigates and solves complex problems and applies appropriate solutions. Ensures the true root cause of any problem is found and a solution is identified which prevents recurrence.

Is the statement covered within the qualification?

Fully covered

Where within the qualification is the statement covered?
Modules:
NET401 Networking Principles
NET403 Introduction to Routing and Switching
NET521 LAN Technologies
NET523 Enterprise Network Technologies
BFC501-I: Work Based and Placement Learning

KSB 48

B7 Committed to continued professional development to ensure growth in professional skill and knowledge.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

KSB 49

B8 Work effectively under pressure showing resilience.

Is the statement covered within the qualification?
Partially covered

Where within the qualification is the statement covered?
BFC501-I: Work Based and Placement Learning

Please provide an explanation for the omission or partial coverage of this statement from the qualification.
As part of the module students undertake a work based placement and complete 96 hours while creating a reflective log of the process.

Additional occupationally relevant content

Additional occupationally relevant content

Item 1

As well as the content aligned to the knowledge, skills and behaviours in the occupational standard, the qualification can include additional occupationally relevant content which is deemed of value to employers. Awarding bodies are asked to justify any content that does not directly align to the occupational standard, using evidence from employers.

Content should be identified at a unit or modular level and each item should be added separately by using the Add Item button. If the qualification does not include any additional content, please leave this

section blank.

Unit or module containing additional content
Introduction to Academic Study Comp Sci Eng

Please give a short description of the additional content
This module aims to give you specific knowledge, skills and understanding required for successful higher education study and engagement with industries related to computing.

Where within the qualification is the additional content covered?
Module B4SCNET-SA Introduction to Academic Study

Please provide an explanation of how the content is relevant to the occupation, including evidence from employers that supports its inclusion in the qualification.
This module provides the students with the fundamental skills required for academic writing, research skills, communication, ethical practice, analysis and critical reflection.

Please attach any additional, relevant employer engagement evidence for the inclusion of additional content.
additional skills.docx

Assessment methods

Assessment methods

Please confirm that the assessment covers all of the content relevant to the knowledge, skills and behaviours in the occupational standard.
Yes

Please outline the methods used to assess the content and provide a rationale for why these methods are valid for the qualification.
Assessment design is key to assuring reliable and valid assessments the principles on which are set out in the College's Inclusive Learning, Teaching & Assessment Strategy, these principles are underpinned by the relevant Advice and Guidance sections of the Quality Code; this ensures that assessments are valid, reliable, suitable in terms of manageable and minimise bias through robust quality assurance process' in a standardised way across the College. Assessment design also provides a mechanism to prevent poor academic practice that ensures academic integrity.

The role of formative assessment cannot be understated and is carried out for the duration of the course in a developmental fashion. Formative assessment is also used as a tool to assess behaviours and allows for group work to be assessed developing the team working skills required of graduates. Summative assessment techniques are always mirrored in a formative manner.

This programme utilises a varied diet of assessment types, as outlined below, that ensure each student develops the knowledge, skills and behaviours required in the sector whilst acquiring important transferable 'softer' skills.

Timed practical sessions are utilised to provide opportunities for students to demonstrate their ability to perform tasks (Skills) in a professional and effective way (Behaviours) whilst evidencing their knowledge of how to achieve a goal. Students are set tasks that ensure they must perform real world problem solving activities allowing them to reflect on future improvements. This type of assessment also provides a mechanism for tutors in assuring that the output is generated by the student themselves much like a written exam.

Online multiple choice exams are utilised on the programme to provide an alternative mechanism that should allow for additional effort in decoding questions and when developed appropriately providing a vehicle for students to demonstrate the depth of their understanding.

Report based case studies are used in various modules as they allow students to apply their knowledge and skills to real life situations as an individual and as part of a team. They provide a means to demonstrate a range of different skills such as the selection on information, analysis, decision-making and problem-solving whilst developing of a range of valuable employability transferable skills likely to be attractive to both employers and students.

Presentations are utilised in various guises. Students use this type of assessment, to present their findings and analysis concisely in a professional and interesting way. The same is true for the production of poster presentation albeit with a different approach.

As expected coursework is used across the programme using real world scenarios, case studies and employer set activities, as with other types of assessment they afford a way for students to work at various levels and in different ways in terms of:
•   Reflection
•   Investigation
•   Analysis
•   Critique
•   Real-world scenarios
•   Justification
•   Linking between practical and theoretical
•   Comparison

Written examinations, both seen and unseen are utilised for a number of reasons, such as, ensuring no third party involvement and therefore guaranteeing academic integrity and they can also develop personal confidence.

The creation of digital assets are used, for example the construction of relational databases, to engage students in activities they would undertake in a work environment.

Employer engagement

Employer engagement

Please describe how employers and industry practitioners were consulted throughout the development of the qualification, including:

- the process of identifying and recruiting relevant employers

- how employers were involved in the development, review and validation of the qualification materials.

Please describe how employers and industry practitioners were consulted throughout the development of the qualification.
Attached are two approval stage documents (Stage 3) that provide evidence of employer engagement in the development and final approval of the programme.

From the attached Section B4 Course Design and Development of B&FC's Taught Awards the section below sets out the role of employers in the development of a programme:

B4.1.3 EMPLOYERS
The role of employers in the (re)development of programmes is to inform on matters relating to industry such as: technical requirements, graduate skills gaps, local, national and where appropriate international demand. Employers will be involved at the initial Stages of development i.e. there is a need to have employer involvement in the Outline Planning Permission Stage of development. Employers are also involved in the Stage 3 Panels, where they provide support for the programme team and substantiate the significance and relevance to the requirements of industry

From the attached Design of Foundation Degrees and Honours Top-Up Years Guidance and Information document the section below talks about Lancaster's principles around the involvement of employers:

A Foundation Degree (FD) is a vocationally focused higher education qualification that integrates academic and work-based learning (WBL) through close collaboration between employers and programme providers. It is designed with employer involvement and is intended to equip learners with the skills and knowledge relevant to their employment.