

NATIONAL SKILLS QUALIFICATIONS

LEVEL: 2

TITLE:

DIGITAL SERVICE OPERATIONS

YEAR:

NATIONAL SKILLS QUALIFICATION

QCF LEVEL 2 - DIGITAL SERVICE OPERATION

GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is aimed at developing and certifying competence in Digital Service Operations, resulting in increased capacity for working as an entry-level Digital Service Operator. The focus is on generic knowledge, language training, personal development and workplace experience.

QUALIFICATION OBJECTIVES

To achieve this qualification, the operator should be able to:

- Demonstrate the knowledge of Web client-side technologies.
- Understand the fundamentals of Content Management Systems
- Understand the fundamentals of Transactions Management
- Demonstrate the knowledge of Basic Digital Marketing
- Understand the fundamentals of e-Commerce Analytics.
- Understand the fundamentals of Cyber Security
- Understand the fundamentals of e-payment.
- Understand the fundamentals of Logistics Management Fundamentals

Mandatory Units

| S/No /Unit No | Reference Number | NOS Title | Credit Value | Guided Learning Hours | Remark |
|------------------|------------------|--------------------------------------------------|-----------------|-----------------------------|---------|
| 1 | ICT/DSO/2/001 | Occupational Health and Safety | 2 | 20 | Level 2 |
| 2 | ICT/DSO/2/002 | Communication in Digital Service Operation | 2 | 20 | Level 2 |
| 3 | ICT/DSO/2/004 | Content Management Systems I | 4 | 40 | Level 2 |
| 4 | ICT/DSO/2/005 | Transactions Management I | 4 | 40 | Level 2 |
| 5 | ICT/DSO/2/006 | Introduction to Cyber Security | 4 | 40 | Level 2 |
| 6 | ICT/DSO/2/007 | Fundamentals of e- payment | 3 | 30 | Level 2 |
| 7 | ICT/DSO/2/008 | Logistics Management Fundamentals | 3 | 30 | Level 2 |
| TOTAL | | | 22 | 220 | |

Optional Units

| S/No /Unit No | Reference Number | NOS Title | Credit Value | Guided Learning Hours | Remark |
|------------------|------------------|----------------------------------------------------|-----------------|-----------------------------|---------|
| 8 | ICT/DSO/2/003 | Introduction to Web Client-Side Technologies | 3 | 30 | Level 2 |
| 9 | ICT/DSO/2/009 | e-Commerce Analytics | 3 | 30 | Level 2 |
| 10 | ICT/DSO/2/010 | Fundamentals of Digital Marketing | 2 | 20 | Level 2 |
| TOTAL | | | 8 | 80 | |

GUIDE

| | |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit title | Provides a clear explanation of the content of the unit. |
| Unit number | The unique number assigned to the unit. |
| Unit reference | The unique reference number given to each unit at qualification approval by NBTE |
| Unit level | Denotes the level of the unit within the National Vocational Qualification framework NVQF. |
| Unit credit value | The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours |
| Unit aim | Provides a brief outline of the unit content. |
| Learning outcome | A statement of what a learner will know, understand or be able to do, as a result of a process of learning. |
| Assessment criteria | A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met. |
| Unit assessment guidance | Any additional guidance provided to support the assessment of the unit. |
| Unit guided learning hours | The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification. |

Qualification: DIGITAL SERVICE OPERATIONS

QCF level: 2

Credit value: 30

Guided learning hours: 300

Level Purpose:

At the end of the Units within, the Learner should be able to:

1. Understand the importance of Communication and Team-work at the workplace;
2. Know basic health and safety requirements in a workplace
3. Demonstrate an understanding of web client-side technologies
4. Understand the concepts and usage of content management systems and should be able to deploy a simple website with a content management system.
5. Understand the basic concepts and principles of electronic transactions and electronic transactions processing and should be able to perform a simple basic electronic transaction.
6. Understand the fundamentals of digital marketing, its uses, applications, methodologies employed and tools used.
7. Exhibit understanding at a minimum of concepts, tools, ethics and procedures of e-commerce analytics.
8. Demonstrate understanding of cyber security concepts and the various applicable technologies in this area.
9. Demonstrate an understanding of the fundamental concepts and technologies in e-Payments, e-Payment systems as well as security and ethical issues.
10. Demonstrate an understanding of logistics as it relates to management information systems including the design concepts.

Level assessment requirements/evidence requirements

There are eight (8) mandatory units (i.e. Units 1, 2, 4, 5, 6, 7, 8) and three (3) optional units (i.e. units 3, 9, 10) in this level to enable the learner to qualify for QCF Level 2 in Digital Service Operation.

The evidence required in this level includes:

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

Unit1: OCCUPATIONAL HEALTH AND SAFETY

Unit reference number: ICT/DSO/2/001

QCF level: 2

Credit value: 2

Guided learning hours: 20

Unit Purpose:

This unit specifies the competencies required to demonstrate understanding of safe work practices. It involves learning about workplace safety, correct use of signs and symbols, identifying and reducing risks of hazards in the work environment and knowing how to protect self from the effects of gaseous, liquid and solid substances;

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

UNIT 01: OCCUPATIONAL HEALTH AND SAFETY

| LEARNING OBJECTIVE (LO) The learner will: | | PERFORMANCE CRITERIA The learner can: | Evidence Type | | | | Evidence Ref. Page No. | | | | |
|-------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------|---------------|--|--|--|------------------------|--|--|--|--|
| | | | | | | | | | | | |
| LO 1: Demonstrate Safe working Practices and Instructions | 1.1 | Explain safe work practice and instructions | | | | | | | | | |
| | 1.2 | Identify safety signs and symbol | | | | | | | | | |
| | 1.3 | Use signs and symbols correctly | | | | | | | | | |
| | 1.4 | Carry out safe work practices and instructions | | | | | | | | | |
| | 1.5 | Work in accordance with health and safety best practices | | | | | | | | | |
| LO 2: Demonstrate Understanding of Safety Hazards and risks | 2.1 | Identify work environment hazards | | | | | | | | | |
| | 2.2 | State methods to reduce the risk of these hazards | | | | | | | | | |
| | 2.3 | Identify Personal Protection Equipment (PPE) Eg: Goggles, Gloves etc. | | | | | | | | | |
| | 2.3 | State methods to resolve an occurring environmental hazard | | | | | | | | | |
| LO 3: Possess the ability to take appropriate actions during accident/injury | 3.1 | Identify basic first aid equipment | | | | | | | | | |
| | 3.2 | State how to maintain hygienic, safe and secure workplace. | | | | | | | | | |
| | 3.3 | State the uses of safety equipment in a workplace as required. | | | | | | | | | |
| LO 4: Demonstrate safe work habit and clean work environment | 4.1 | Use safe access and exit routes in the work environment | | | | | | | | | |
| | 4.2 | Dispose all wastes appropriately to designated waste facilities | | | | | | | | | |
| | 4.3 | Explain methods of resource conservation (e.g. Water, Energy etc) | | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

Unit 2: COMMUNICATION AND INTERPERSONAL SKILLS

Unit reference number: ICT/DSO/2/002

QCF level: 2

Credit value: 2

Guided learning hours: 20

Unit Purpose:

This unit specifies the competencies required to demonstrate good communication and interpersonal skills. It involves the ability to read and understand documented instructions and the ability to know how to communicate respectfully when in a bad mood or under pressure;

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

UNIT 02: COMMUNICATIONS AND INTERPERSONAL SKILL

| LEARNING OBJECTIVE (LO) The learner will: | | PERFORMANCE CRITERIA The learner can: | Evidence Type | | | | | Evidence Ref. Page No. | | |
|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------|---------------|--|--|--|--|------------------------|--|--|
| | | | | | | | | | | |
| LO 1: Demonstrate knowledge of the importance of good communication | 1.1 | State reasons why good communication is important | | | | | | | | |
| | 1.2 | List ways to communicate effectively | | | | | | | | |
| | 1.3 | Exhibit patience and a mild demeanour while communicating with colleagues, managers and clients | | | | | | | | |
| | 1.4 | Speak in a respectful manner | | | | | | | | |
| | 1.5 | Use respectful body language | | | | | | | | |
| | 1.6 | Interpret verbal communication accurately | | | | | | | | |
| | | | | | | | | | | |
| LO 2: Demonstrate ability to document and follow documented instructions | 2.1 | Read and accurately follow steps in a an instruction manual pertaining to any of the units in this course | | | | | | | | |
| | 2.2 | Document information in the workplace (Eg: Receipt, Invoices, Reports) | | | | | | | | |
| | 2.3 | Document Errors, solution, processes and reports | | | | | | | | |

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| Learners Signature: | Date: |
| Assessors Signature: | Date: |
| IQA Signature (if sampled) | Date: |
| EQA Signature (if sampled) | Date: |

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| | 3.5 | Explain the terms: variables, function and objects. | | | | | | | | | | |
| LO 4 | | | | | | | | | | | | |
| Demonstrate Knowledge of Basic JavaScript Programming | 4.1 | Show JavaScript integration within a HTML document | | | | | | | | | | |
| | 4.2 | Show manipulation of DOM elements with JavaScript | | | | | | | | | | |
| | 4.3 | Use a JavaScript function and automate an action or activity within the HTML document | | | | | | | | | | |

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| Learners Signature: | Date: |
| Assessors Signature: | Date: |
| IQA Signature (if sampled) | Date: |
| EQA Signature (if sampled) | Date: |

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|----------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| Systems | | etc | | | | | | | | | |
| | 1.3 | Explain the uses of Content Management System | | | | | | | | | |
| | 1.4 | Outline the benefits of Content Management | | | | | | | | | |
| | 1.5 | Identify the features of CMS | | | | | | | | | |
| LO 2 | | | | | | | | | | | |
| Understand Content Types | 2.1 | Identify different Content types and sub-contents e.g News, e-commerce, blogs, video/audio, images etc. | | | | | | | | | |
| | 2.2 | Compare the application and benefits of various content types | | | | | | | | | |
| | 2.3 | Enhance content for different uses. E.g News, streaming, product listing | | | | | | | | | |
| | 2.4 | Optimize content for different CMS flat form eg, mobile desktop, etc | | | | | | | | | |
| LO3 | | | | | | | | | | | |
| Demonstrate knowledge of the use of Content Management System | 3.1 | Add content using template | | | | | | | | | |
| | 3.2 | Add attachment and list to content management systems | | | | | | | | | |
| | 3.3 | Edit, search, preview and publish content online | | | | | | | | | |
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Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

Unit 5: TRANSACTIONS MANAGEMENT I

Unit reference number: ICT/DSO/2/005

QCF level: 2

Credit value: 4

Guided learning hours: 40

Unit Purpose:

This unit standard specifies the competencies required to demonstrate understanding of transaction processing systems and enterprise resource planning systems. It includes demonstrating knowledge of the use of both systems and also how transactions are authorised, cleared and settled.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | | Criteria:- | Evidence Type | | | | Evidence Ref Page number | | | |
|---------------------------------------------------------------------|-----|---------------------------------------------------------|---------------|--|--|--|--------------------------|--|--|--|
| LO 1 <i>Understand Transaction Processing System</i> | 1.1 | Define transaction processing system | | | | | | | | |
| | 1.2 | Explain the objectives of transaction processing system | | | | | | | | |
| | 1.3 | List key terminologies and technologies employed in | | | | | | | | |

| | | | | | | | | | | | | | |
|------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| | | transaction processing system | | | | | | | | | | | |
| | 1.4 | Describe the transaction processing cycle | | | | | | | | | | | |
| | 1.5 | Explain the various methods of transaction processing Eg. Payroll, Inventory Control, accounts payable | | | | | | | | | | | |
| LO 2 | | | | | | | | | | | | | |
| <i>Understand Transaction Dynamics</i> | 2.1 | Describe transaction settlement procedures | | | | | | | | | | | |
| | 2.2 | Describe end-to-end transaction processing | | | | | | | | | | | |
| | 2.3 | Describe the information flow within a transaction system | | | | | | | | | | | |
| LO 3 | | | | | | | | | | | | | |
| Understand Enterprise Resource Planning System | | | | | | | | | | | | | |
| | 3.1 | Define Enterprise Resource Planning | | | | | | | | | | | |
| | 3.2 | List examples of Enterprise Resource Planning Systems | | | | | | | | | | | |
| | 3.3 | Explain the role of Enterprise Resource Planning system in transaction processing | | | | | | | | | | | |

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| Learners Signature: Assessors Signature: | Date: Date: |
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IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

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| Understand basics of cyber security | 1.2 | Identify main malware types how to prevent/limit malware infection | | | | | | | | | | |
| | 1.3 | Describe legal and regulatory issues relating to cyber security | | | | | | | | | | |
| | 1.4 | Identify information assets | | | | | | | | | | |
| LO 2 | | | | | | | | | | | | |
| Understand Cyber Security protocols and Concept | 2.1 | Explain basic networking concepts and network security challenges | | | | | | | | | | |
| | 2.2 | Describe various internet /web protocols | | | | | | | | | | |
| | 2.3 | Explain web application/infrastructure vulnerabilities | | | | | | | | | | |
| | 2.4 | Explain basic cyber security terminologies | | | | | | | | | | |
| LO 3 | | | | | | | | | | | | |
| Understand Infrastructure and Security Concept | 3.1 | Describe basic authentication mechanism and alternative authentication mechanism | | | | | | | | | | |
| | 3.2 | Define cryptography and its terminologies | | | | | | | | | | |
| | 3.3 | Explain encryption and Data handling technologies | | | | | | | | | | |
| | 3.4 | Explain firewalls, network, VPNs, intrusion, detection and prevention technologies | | | | | | | | | | |

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| Learners Signature: | Date: |
| Assessors Signature: | Date: |

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

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| Understand Logistic Management Concept | 1.2 | Explain key logistics terminologies | | | | | | | | | |
| | 1.3 | Describe significance of logistics in supply chains | | | | | | | | | |
| | 1.4 | Describe the logistics cycle | | | | | | | | | |
| | 1.5 | Describe logistics management information systems | | | | | | | | | |
| | 1.6 | List the different types of logistics record | | | | | | | | | |
| LO 2 | | | | | | | | | | | |
| Understand the Inventory Control System in Logistics Management | 2.1 | Describe an Inventory Control System | | | | | | | | | |
| | 2.2 | Explain the objectives of inventory control systems | | | | | | | | | |
| | 2.3 | Explain the fundamental terms in inventory control systems | | | | | | | | | |
| | 2.4 | List the types of maximum-minimum inventory control system | | | | | | | | | |
| | 2.5 | Explain inventory control systems in terms of logistics arrangement | | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

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| | | installation issues | | | | | | | | | |
|--|--|---------------------|--|--|--|--|--|--|--|--|--|

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|-----------------------------------|--------------|
| Learners Signature: | Date: |
| Assessors Signature: | Date: |
| IQA Signature (if sampled) | Date: |
| EQA Signature (if sampled) | Date: |

Unit 11: FUNDAMENTALS OF DIGITAL MARKETING

Unit Reference Number: ICT/DSO/2/011

QCF level: 2

Credit value: 2

Guided learning hours: 20

Unit Purpose:

This unit standard specifies the competencies required to demonstrate knowledge of digital marketing and the prevalent digital marketing tools. You will be involved in activities such as designing forms online and distributing online survey. This unit standard is intended for those interested in marketing products and services online

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below:

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | Criteria:- | Evidence Type | Evidence Ref Page number |
|-----------------------|------------|---------------|-----------------------------|
|-----------------------|------------|---------------|-----------------------------|

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|---------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|
| LO 1. Understand Basics of Digital Marketing | 1.1 | Define Digital Marketing | | | | | | | | |
| | 1.2 | Explain the fundamentals of digital marketing, eg survey, market segmentation, etc | | | | | | | | |
| | 1.3 | Data analytics of digital marketing | | | | | | | | |
| | 1.4 | Explain digital marketing plan | | | | | | | | |
| LO 2. Understand Digital Marketing Tools | | | | | | | | | | |
| | 2.1 | List different digital marketing tools | | | | | | | | |
| | 2.2 | Explain digital marketing tools | | | | | | | | |
| | 2.3 | Describe marketing automation tools | | | | | | | | |
| | 2.4 | Create dynamic forms online | | | | | | | | |
| | 2.5 | Distribute online survey | | | | | | | | |
| | 2.6 | Explain buyer persona, email campaign, pop up and opt in forms | | | | | | | | |
| | 2.7 | Describe market research terms eg. Focus group, Interviews, Demographics etc | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

*NATIONAL SKILLS
QUALIFICATION*

(NSQ)

*DIGITAL SERVICE
OPERATION
LEVEL 3*

NATIONAL SKILLS QUALIFICATION

QCF LEVEL 3- DIGITAL SERVICE OPERATION

GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is aimed at developing and certifying competence in Digital Service Operations, resulting in increased capacity for working as a Junior-level Digital Service Operator. The focus is on generic knowledge, language training, personal development and workplace experience.

QUALIFICATION OBJECTIVES

To achieve this qualification, the operator should gain the following competencies:

- Understand Content Management Systems at an Intermediate level.
- Understand Transactions Management at an Intermediate level.
 - Understand web server-side scripting technologies.
 - Understand Digital Marketing at an Intermediate level.
 - Understand the fundamentals of Project Management
 - Understand the fundamentals of Ethical Hacking
 - Understand the fundamentals of Computer Networking
- Understand the fundamentals of Database Management and Administration.
 - Understand knowledge management and its infrastructure
- Understand the fundamentals of IT Strategy for Digital Service Operations

Mandatory Units

| S/No /Unit No | Reference Number | NOS Title | Credit Value | Guided Learning Hours | Remark |
|---------------------|---------------------|------------------------------------|-----------------|-----------------------------|---------|
| 1 | ICT/DSO/3/001 | Transactions Management II | 5 | 50 | Level 3 |
| 2 | ICT/DSO/3/002 | Web Server-Side Technologies | 5 | 50 | Level 3 |
| 3 | ICT/DSO/3/003 | Introduction to Ethical Hacking | 4 | 40 | Level 3 |
| 4 | ICT/DSO/3/004 | Introduction to Computer | 4 | 40 | Level 3 |

| | | | | | |
|-------|---------------|---------------------------------------------|----|-----|---------|
| | | Networking | | | |
| 5 | ICT/DSO/3/005 | Introduction to Relational Database | 5 | 50 | Level 3 |
| 6 | ICT/DSO/3/009 | Introduction to Knowledge Management | 4 | 40 | Level 3 |
| 7 | ICT/DSO/3/010 | IT Strategy in Digital Service Operations I | 4 | 40 | Level 3 |
| TOTAL | | | 31 | 310 | |

Optional Units

| S/No /Unit No | Reference Number | NOS Title | Credit Value | Guided Learning Hours | Remark |
|---------------|------------------|---------------------------------------------------------------------|--------------|-----------------------|---------|
| 8 | ICT/DSO/3/006 | Content Management Systems II | 5 | 50 | Level 3 |
| 9 | ICT/DSO/3/007 | Digital Marketing II | 5 | 50 | Level 3 |
| 10 | ICT/DSO/3/008 | Introduction to IT Project Management in Digital Service Operations | 4 | 40 | Level 3 |
| TOTAL | | | 14 | 140 | |

GUIDE

| | |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit title | Provides a clear explanation of the content of the unit. |
| Unit number | The unique number assigned to the unit. |
| Unit reference | The unique reference number given to each unit at qualification approval by NBTE |
| Unit level | Denotes the level of the unit within the National Vocational Qualification framework NVQF. |
| Unit credit value | The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours |
| Unit aim | Provides a brief outline of the unit content. |
| Learning outcome | A statement of what a learner will know, understand or be able to do, as a result of a process of learning. |
| Assessment criteria | A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met. |
| Unit assessment guidance | Any additional guidance provided to support the assessment of the unit. |
| Unit guided learning hours | The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification. |

Qualification: DIGITAL SERVICE OPERATIONS

QCF level: 3

Credit value: 45

Guided learning hours: 450

Level Purpose:

At the end of the Units within, the Learner should be able to:

11. Demonstrate intermediate-level knowledge of usage and applications of Content Management Systems.
12. Demonstrate **intermediate-level** knowledge of Transaction Management, its concepts and applications.
13. Demonstrate **basic** knowledge of web server-side scripting, its concepts and applications.
14. Demonstrate knowledge of digital marketing tools and techniques.
15. Demonstrate knowledge of **basic** network administration as it relates to administering a Local Area Network (LAN)
16. Demonstrate Knowledge of managing a basic database system for organizations that maintain relational data.
17. Demonstrate an understanding of the **fundamentals** of IT project management
18. Demonstrate an understanding of the **essentials** of Ethical Hacking
19. Demonstrate an understanding of the fundamentals of IT strategy in relation to Digital Service Operations

Level assessment requirements/evidence requirements

There are seven (7) compulsory units (i.e. units 1,2,3,4,5, 6 and 7) and three (3) optional units (i.e. 8, 9 and 7) in this level to enable the learner to qualify for QCF Level 3 in Digital Service Operation.

The evidence required in this level includes:

8. Questioning
9. Direct Observation of the learner's performance
10. Recognition of Prior Learning and experience
11. Authentic statement/Witness testimony
12. Personal statement/reflective account.
13. Product of the learners work.
14. Assignment

Unit 1: TRANSACTIONS MANAGEMENT II

Unit Reference Number: ICT/DSO/3/001

QCF level: 3

Credit value: 5

Guided learning hours: 50

Unit Purpose:

This unit standard specifies the competencies required to demonstrate understanding of transactions management at an intermediate level highlighting other major concepts such as transaction authorization.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below:

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

Pre-requisite: The learner must have completed Transaction Management I in level 2

| LO (Learning outcome) | Criteria:- | Evidence | Evidence Ref |
|------------------------------|-------------------|-----------------|---------------------|
|------------------------------|-------------------|-----------------|---------------------|

| | | | Type | | | | Page number | | | |
|------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|------|--|--|--|-------------|--|--|--|
| LO 1 Understand Transaction Authorization | 1.1 | Explain the term transaction authorization | | | | | | | | |
| | 1.2 | Describe the transaction authorization process | | | | | | | | |
| | 1.3 | Describe the permission levels involved in transaction authorization | | | | | | | | |
| LO 2 Understand Transaction Processing | 2.1 | Explain transaction clearing and settlement procedures | | | | | | | | |
| | 2.2 | Discuss the concept of split transactions or split payment transactions | | | | | | | | |
| | 2.3 | Describe billing in transactions | | | | | | | | |
| | 2.4 | Describe electronic data interactions during transactions execution or processing | | | | | | | | |
| LO 3 Understand Post- Transaction Activities | 3.1 | Describe the system of querying or ascertaining transaction status | | | | | | | | |
| | 3.2 | Describe dispute resolutions in e-commerce | | | | | | | | |
| | 3.3 | Describe process of logging transaction records | | | | | | | | |
| | 3.4 | Demonstrate the knowledge of recording successful transactions in a web grid interface. | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

Unit 2: WEB SERVER-SIDE TECHNOLOGIES (PHP, SQL)

Unit reference number: ICT/DSO/3/002

QCF level: 3

Credit value: 5

Guided learning hours: 50

Unit Purpose:

This unit standard specifies the competencies required to work with web server-side technologies: Php & MySQL used in processing, manipulating and storing data exchanged in a website infrastructure.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | Criteria:- | Evidence Type | Evidence Ref Page number |
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| <i>Demonstrate a knowledge of database management system</i> | 4.2 | Develop Database connectivity using MySQL | | | | | | | | | |
| | 4.3 | Use PHP to connect with MySQL | | | | | | | | | |

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| Learners Signature: Assessors Signature: Date: IQA Signature (if sampled) Date: | Date: |
| EQA Signature (if sampled) | Date: |

Unit 3: Introduction to Ethical Hacking

Unit reference number: ICT/DSO/3/003

QCF level: 3

Credit value: 4

Guided learning hours: 40

Unit Purpose:

This unit standard specifies the competencies required to demonstrate understanding of key security issues in digital service operations. It includes activities such as describing threats facing digital security and mechanisms to mitigate them. This unit standard is intended for those interested in offering cyber security services

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | | Criteria:- | Evidence Type | | | | Evidence Ref Page number | | | |
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| LO 1 <i>Understand the concept of Ethical Hacking</i> | 1.1 | Define Ethical Hacking | | | | | | | | |
| | 1.2 | Describe Ethical Hacking methodology | | | | | | | | |
| | 1.3 | Explain Ethical Hacking terminologies such as threat, exploit, vulnerability, target of evaluation (ToE) denial of service etc. | | | | | | | | |
| | | | | | | | | | | |
| LO 2 <i>Understand the processes of ethical hacking</i> | 2.1 | Describe the different phases of ethical hacking: Reconnaissance, foot printing, scanning, gaining access, maintaining access and covering tracks | | | | | | | | |
| | 2.2 | Describe the techniques of Ethical Hacking | | | | | | | | |
| | 2.3 | Explain Port, Service and Data Enumeration as it relates to hacking | | | | | | | | |
| | 2.4 | | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

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IQA Signature (if sampled)

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EQA Signature (if sampled)

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Unit 4: Introduction to Computer Networking

Unit reference number: ICT/DSO/3/004

QCF level: 3

Credit value: 4

Guided learning hours: 40

Unit Purpose:

This unit standard specifies the competencies required to demonstrate understanding of key network fundamentals. It involves learning and classification of IP address, computation of subnet mask and provides a framework for both designing and networking systems. This unit standard is intended for those interested in computer networking.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | Criteria:- | Evidence Type | Evidence Ref Page number |
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| LO 1 | | | |
| 1.1 | Define a network | | |

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| <i>Understand Networks and its Essentials</i> | 1.2 | List network hardware component | | | | | | | | | | |
| | 1.3 | Identify types of network and network topologies | | | | | | | | | | |
| | 1.4 | Explain types of network configuration (peer-to-peer networks, client/server networks) | | | | | | | | | | |
| | 1.5 | Describe the different types of cable categories and connectors | | | | | | | | | | |
| <i>LO 2</i> <i>Understand Network Layers, Model and Architecture</i> | 2.1 | Define IP address terminologies (e.g. Host, Broadcast etc) | | | | | | | | | | |
| | 2.2 | List the TCP/IP Reference Model | | | | | | | | | | |
| | 2.3 | State the OSI reference model | | | | | | | | | | |
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| LO 3 Understand IP Address Classes and Subnetting | 3.1 | List classes of IP address | | | | | | | | | | |
| | 3.2 | Explain the types of IP Address (Public and Private) | | | | | | | | | | |
| | 3.3 | Define subnet mask | | | | | | | | | | |
| | 3.4 | Demonstrate the calculation of subnet mask | | | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

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EQA Signature (if sampled)

Date:

Unit 5: Introduction to Relational Database

Unit reference number: ICT/DSO/3/005

QCF level: 3

Credit value: 5

Guided learning hours: 50

Unit Purpose:

This unit standard specifies the competencies required to demonstrate understanding of Database Management System (DBMS) and its architecture, the concept of Relational Database Management System (RDBMS), its architecture, and relational model terminology. It facilitates a fundamental understanding of the design and planning issues considered for designing a database and the basics of Structured Query Language.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | Criteria:- | Evidence Type | Evidence Ref Page number |
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| LO1. Understand Database Models & Structure | 1.1 | Define Database and Database Management System (DBMS) | | | | | | | | | | | | | | | | | | |
| | 1.2 | Describe the need for a database system | | | | | | | | | | | | | | | | | | |
| | 1.3 | Identify the need for database planning | | | | | | | | | | | | | | | | | | |
| | 1.4 | Identify the functional components of a DBMS | | | | | | | | | | | | | | | | | | |
| | 1.5 | Identify the effects of poor database planning and design | | | | | | | | | | | | | | | | | | |
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| LO2 Understand Database Design and logic | 2.1 | Explain entity-relationship model | | | | | | | | | | | | | | | | | | |
| | 2.2 | List types of relationships between entities | | | | | | | | | | | | | | | | | | |
| | 2.3 | Describe logical database design | | | | | | | | | | | | | | | | | | |
| | 2.4 | Explain Relational Database Management System (RDBMS) | | | | | | | | | | | | | | | | | | |
| | 2.5 | Creating an entity-relationship model | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| LO3 Understand Database Structured Query Language and Management Systems | 3.1 | Understanding Structured Query Language (SQL) | | | | | | | | | | | | | | | | | | |
| | 3.2 | Create the different Database management systems (MySQL, MS SQL, Oracle SQL, etc) | | | | | | | | | | | | | | | | | | |
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Learners Signature:

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Assessors Signature:

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Unit 6: CONTENT MANAGEMENT SYSTEMS II

Unit reference number: ICT/DSO/3/006

QCF level: 3

Credit value: 5

Guided learning hours: 50

Unit Purpose:

This unit standard specifies the competencies required to use content management systems at an intermediate level. It tests knowledge of creating quality user interfaces with good user experience for CMS and extending a CMS with plugin functionality.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

Pre-requisite: The learner must have completed Content Management System I in Level 2

| LO (Learning outcome) | | Criteria:- | Evidence Type | | | | Evidence Ref Page number | | | |
|------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--|--|--|-----------------------------|--|--|--|
| LO 1 Understand how to improve Content Management System User Experience | 1.1 | Describe how User Interfaces can be integrated into Content Management systems | | | | | | | | |
| | 1.2 | Describe User Interface Systems or frameworks that can be integrated into content management systems | | | | | | | | |
| | 1.3 | Develop quality User Interface with good user experience with a content management system | | | | | | | | |
| LO 2 Understand Content Management System Functionality | 2.1 | Describe plugins and their importance in Content Management Systems | | | | | | | | |
| | 2.2 | Describe effect of plugin integrations in Content Management Systems towards achieving a multi-functional website | | | | | | | | |
| | 2.3 | Identify types and categories of plugins | | | | | | | | |
| | 2.4 | Describe methodologies for plugin integration into content management systems | | | | | | | | |
| | 2.5 | Demonstrate the installation of different plugins extending the features of a Content Management System for the design a robust blogging or news/media website | | | | | | | | |
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| Learners Signature: | Date: |
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Assessors Signature:

Date:

IQA Signature (if sampled)

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EQA Signature (if sampled)

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Unit 7: Digital Marketing II

Unit reference number: ICT/DSO/3/007

QCF level: 3

Credit value: 5

Guided learning hours: 50

Unit Purpose:

This unit standard specifies the competencies required in digital marketing operations at an intermediate level. It facilitates knowledge of the basics of online marketing tools and techniques. This unit standard is intended for those interested in using digital strategies to communicate business specific information to an audience in order to illicit a response.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

Pre-requisite: The learner must have completed Digital Marketing I in Level 2

| LO (Learning outcome) | | Criteria:- | Evidence Type | | | | Evidence Ref Page number | | | |
|----------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------|---------------|--|--|--|-----------------------------|--|--|--|
| LO 1 <i>Demonstrate an understanding on Search Engines</i> | 1.1 | Define a search Engine | | | | | | | | |
| | 1.2 | Identify different search engines | | | | | | | | |
| | 1.3 | Describe the importance engines to websites, users and businesses | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| LO 2: <i>Demonstrate knowledge of digital marketing techniques</i> | 2.1 | Define digital marketing techniques | | | | | | | | |
| | 2.2 | List digital marketing techniques e.g. Search Engine Optimization, Affiliate Marketing, Social Media Marketing etc. | | | | | | | | |
| | 2.3 | Describe digital marketing techniques and their importance | | | | | | | | |
| | 2.4 | Conduct digital marketing with one or more digital marketing techniques | | | | | | | | |
| LO 3: Demonstrate knowledge of Digital Marketing Matrices | 3.1 | Define digital marketing metrics | | | | | | | | |
| | 3.2 | Describe how to measure online marketing successes with digital marketing tools. | | | | | | | | |
| | 3.3 | Conduct analysis of digital marketing campaign | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

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EQA Signature (if sampled)

Date:

Unit 8: INTRODUCTION TO IT PROJECT MANAGEMENT IN DIGITAL SERVICE OPERATIONS

Unit reference number: ICT/DSO/3/008

QCF level: 3

Credit value: 4

Guided learning hours: 40

Unit Purpose:

This unit standard certifies the learner's understanding of key project management essentials in digital service operations. The unit involves understanding the fundamental concepts of Project Management and the antecedents for Project Management success and failure. This unit standard is intended for individuals interested in managing IT Projects across the project lifecycle.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | Criteria:- | Evidence Type | Evidence Ref Page number |
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| LO 1 | | | |

Learners Signature:

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Assessors Signature:

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IQA Signature (if sampled)

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EQA Signature (if sampled)

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Unit 9: Introduction to Knowledge Management

Unit reference number: ICT/DSO/3/009

QCF level: 3

Credit value: 4

Guided learning hours: 40

Unit Purpose:

This unit standard certifies the learner's understanding of knowledge management essentials in digital service operations. The unit involves understanding the fundamental concepts of Knowledge Management and knowledge management infrastructure. This unit standard is intended for individuals interested in managing knowledge in project documentation for business profitability.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below;

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

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EQA Signature (if sampled)

Date:

UNIT 10: IT Strategy in Digital Service Operations I

Unit Reference Number: ICT/DSO/3/0010

QCF Level: 3

Credit Value: 4

Guided Learning hours: 40

Unit Purpose:

This qualification is aimed at developing and certifying competence in digital Service Operations, with specific focus on increasing capacity in the understanding of objectives, principles and tactics involved in using technology in a business environment.

Unit assessment requirements/evidence requirements

The unit requires the various assessment materials below:

1. Questioning
2. Direct Observation of the learner's performance
3. Recognition of Prior Learning and experience
4. Authentic statement/Witness testimony
5. Personal statement/reflective account.
6. Product of the learners work.
7. Assignment

| LO (Learning outcome) | | Criteria:- | Evidence Type | | | | Evidence Ref Page number | | | |
|-----------------------------------------------------------|-----|-----------------------------------------------------|---------------|--|--|--|--------------------------|--|--|--|
| LO 1: <i>Understand the concept IT Strategy</i> | 1.1 | Explain IT Strategy | | | | | | | | |
| | 1.2 | Outline the different approaches to IT strategy | | | | | | | | |
| | 1.3 | Discuss the benefits of IT strategies to businesses | | | | | | | | |

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| LO 2: Understand the internal and external business environments | 2.1 | Describe a business environment | | | | | | | | | | | | | | | | | |
| | 2.2 | Differentiate between the internal (Micro) and External (Macro) Business environment | | | | | | | | | | | | | | | | | |
| | 2.3 | Outline the components of an internal and external business environment | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| LO 3: Demonstrate the knowledge of environmental analysis tools and techniques | 3.1 | Outline tools for internal (micros) environmental analysis | | | | | | | | | | | | | | | | | |
| | 3.2 | Outline tools for external (macro) environmental analysis | | | | | | | | | | | | | | | | | |
| | 3.3 | Conduct internal (micro) environmental analysis of a Digital Service business | | | | | | | | | | | | | | | | | |
| | 3.4 | Conduct external (macro) environmental analysis of a Digital Service Business | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| LO 4: Understand the Role of Strategy in Digital Service Operations Businesses | 4.1 | Define business mission, vision, objectives | | | | | | | | | | | | | | | | | |
| | 4.2 | Discuss the importance of strategy for Digital Service Businesses | | | | | | | | | | | | | | | | | |
| | 4.3 | Discuss the relationship between strategy, objective and business environment | | | | | | | | | | | | | | | | | |
| | 4.4 | Develop a strategy for a Digital Service business | | | | | | | | | | | | | | | | | |

Learners Signature:

Date:

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

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| S/N | NAMES | ADDRESS/ PHONE NUMBER/E-MAIL | SIGNATURE |
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