



Fact Sheet

Diploma in Information
Technology in Network Design
and Administration

- Day classes (full time)



Creative &
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Universitas

Diploma in IT in Network Design and Administration (Day classes)

FACULTY OF INFORMATION TECHNOLOGY

Higher Education Studies: 2023 Fact Sheet

Programme Title	SAQA ID	Credits	NQF
Diploma in Information Technology in Network Design and Administration	91927	370	6

Available at: Bloemfontein, Boksburg, Polokwane, Potchefstroom, Pretoria, and Stellenbosch campuses.

Programme description

The Diploma in Information Technology in Network Design and Administration is designed to provide opportunities for qualifying incumbents to access positions in Entry to senior Network and Design in Information Technology and administration. The qualification will develop a well-rounded learner with the knowledge base, theory and methodology of project management and enable them to demonstrate initiative and responsibility in an academic or professional context.

This Diploma in Information Technology in Network Design and Administration (DITNDA) will provide learners with the relevant skills and knowledge required to implement internet working solutions, analyse configurations, recommend solutions and identify shortcomings within their configurations. This will allow learners to work with enterprise-level networks or consult companies concerning the requirements for their networks. The demand for IT Personnel is not limited to a specific sector or workplace as most organisations pursue their strategies through the implementation of IT Technologies. This is evident in an article by the Project Management Institute which states that global senior executives ranked project management as critical in their ability to deliver success and remain competitive. The need for IT Personnel can be found in business, banking, engineering and education as all institutions Need IT. Professional bodies like the IITPSA (Institute of Information Technology Professionals South Africa), formerly known as Computer Society South Africa (CSSA), expressed the need for fundamental learning qualifications. These qualifications prepare incumbents for a career in Information Technology to meet the critical skills needed in South Africa.

Admission requirements

The minimum entry requirement for this qualification is:

- ▶ National Senior Certificate (NSC) or equivalent with diploma exemption. Mathematics is a recommendation. Communication Skills at NQF Level 4. Mathematical Literacy at NQF Level 4. Computer Literacy at NQF Level 3. RPL option is available.

Mode of study | Duration

Day Classes (Full time): 3 years (5 days/week)

Programme outline

* Indicate subjects that need to be completed in the sequence stipulated, i.e. it is a prerequisite to first complete Module A before registering for Module B, or complete 1st Year, before registering for 2nd year.

Year 1 Semester 1 Subjects:

- ▶ COS511: Computer Systems (1A)
- ▶ NET511: Networks (1A)
- ▶ DAT511: Databases (1A)
- ▶ PPM511: Principles of Project Management (1A)
- ▶ CWE511: Communication in the Working Environment (1A)

Year 1 Semester 2 Subjects:

- ▶ COS512: Computer Systems (1B)
- ▶ NET512: Networks (1B)
- ▶ DAT512: Databases (1B)
- ▶ PPM512: Principles of Project Management (1B)
- ▶ CWE512: Communication in the Working Environment (1B)

Year 2 Semester 1 Subjects:

- ▶ COS621: Computer Systems (2A)
- ▶ NET621: Networks (2A)
- ▶ DAT621: Databases (2A)
- ▶ PPM621: Principles of Project Management (2A)

Year 2 Semester 2 Subjects:

- ▶ COS622: Computer Systems (2B)
- ▶ NET622: Networks (2B)
- ▶ DAT622: Databases (2B)
- ▶ PPM622: Principles of Project Management (2A)
- ▶ WIL622: Work Integrated Learning

Year 3 Semester 1 Subjects:

- ▶ COS731: Computer Systems (3A)
- ▶ NET731: Networks (3A)
- ▶ DAT731: Databases (3A)
- ▶ ICT631: ICT Trends (3A)

Year 3 Semester 2 Subjects:

- ▶ COS732: Computer Systems (3B)
- ▶ NET732: Networks (3B)
- ▶ DAT732: Databases (3B)
- ▶ ICT632: ICT Trends (3B)
- ▶ WIL732 Work Integrated Learning

*** Note that all students must complete 480 hours of WIL in the workplace in the 2nd and 3rd year of their studies**

Overview of Modules

Computer Systems 1A

The module introduces the student to fundamental design principles and elements. Students are further engaged with steps in the design process through practical application, such as research, conceptual development, execution, an presentation.

Networks 1A

The purpose of the Networks module is to explain that a computer network is defined as an interconnected collection of autonomous computers. Computers are said to be interconnected if they can exchange information. Connection is physically established through cables, lasers, microwaves, fibre optics and communication satellite.

Principles of Project Management 1A

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorised into five Process Groups.

Databases 1A

In the past, designing a database has been a task performed by people in information technology (IT) departments and professional database developers. These people usually had mathematical, computer science, or systems design backgrounds and typically worked with large mainframe databases. Many of them were experienced programmers and had coded several database application programs consisting of thousands of lines of code. (And these people were usually very overworked due to the nature and importance of their work!) People designing database systems needed to have a solid educational background because most of the systems they created were meant to be used companywide. Even when creating databases for single departments within a company or small business, database designers still required extensive formal training because of the complexity of the programming languages and database application programs they were using. As technology advanced, however, those educational requirements evolved.

Communication in the Working Environment 1A

The purpose of the communication in the working environment module is to provide the student with an understanding of various communication methods needed in the working environment. This entails verbal and non-verbal communication, which is essential to succeed in the workforce. Furthermore, the module will enhance their presentation skills to prepare students to be effective communicators, either in a written format or presenting on behalf of the company to a client.

Computer Systems 1A

The computer Systems module aims to provide the student with a basic understanding of PC (Laptop and Desktop) systems and relevant peripherals. System safety is included.

Students will also be able to demonstrate effective use of computer systems in a business environment and understand the various components of a computer system, including assembling and installing hardware components.

Networks 1B

Students are introduced to various sub-disciplines within Diploma in Information Technology in Network Design and Administration during this module. This includes networking fundamentals, IP services, security fundamentals, automation and programmability. Designed for agility and versatility, CCNA validates that you have the skills required to manage and optimise today's most advanced networks.

Principles of Project Management 1B

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorised into five Process Groups

Databases 1B

In the past, designing a database has been a task performed by people in information technology (IT) departments and professional database developers. These people usually had mathematical, computer science, or systems design backgrounds and typically worked with large mainframe databases. Many of them were experienced programmers and had coded several database application programs consisting of thousands of lines of code. (And these people were usually very overworked due to the nature and importance of their work!) People designing database systems needed to have a solid educational background because most of the systems they created were meant to be used companywide. Even when creating databases for single departments within a company or small business, database designers still required extensive formal training because of the complexity of the programming languages and database application programs they were using. As technology advanced, however, those educational requirements evolved.

Communication in the Working Environment 1B

Students are introduced to various sub-disciplines within graphic design during this module, including corporate identity development, packaging design, and promotional design. Students must apply knowledge of the design process, visual research and creative strategies in developing and executing visual solutions for a single element in a campaign.

Computer Systems 1B

The Computer Systems module aims to provide the student with a basic understanding of PC (Laptop and Desktop) systems and relevant peripherals. System safety is included. Students will also be able to demonstrate effective use of computer systems in a business environment and understand the various components of a computer system, including assembling and installing hardware components.

Networks 2A

During this module, students are trained and tested knowledge and skills related to implementing core enterprise network technologies, including Dual stack (IPv4 and IPv6) architecture, Virtualisation, Infrastructure, Network assurance Security and Automation

Principles of Project Management 2A

During this module, students are introduced to a variety of project management, such as of Understand that SCRUM is simple but not easy, getting people on Board, using team consultants to optimise Team Performance and Implementing the SCRUM Roles.

Databases 2A

Candidates for this exam should have expertise in integrating, transforming, and consolidating data from various structured and unstructured data systems into a suitable structure for building analytics solutions. Azure Data Engineers help stakeholders understand the data through exploration, and they develop and maintain secure and compliant data processing pipelines using different tools and techniques. These professionals use various Azure data services and languages to store and produce cleansed and enhanced datasets for analysis. Azure Data Engineers also help ensure that data pipelines and data stores are high-performing, efficient, organised, and reliable, given a set of business requirements and constraints. They deal with unanticipated issues swiftly, and they minimise data loss. They also design, implement, monitor, and optimise data platforms to meet the data pipelines needs. A candidate for this exam must have strong knowledge of data processing languages such as SQL, Python, or Scala, and they need to understand parallel processing and data architecture patterns.

Computer Systems 2A

Candidates for this exam are Microsoft 365 Enterprise Administrators who evaluate, plan, migrate, deploy, and manage Microsoft 365 services. They perform Microsoft 365 tenant management tasks for an enterprise, including its identities, security, compliance, Power Platform, and supporting technologies.

Networks 2B

The Implementing Cisco Enterprise Advanced Routing and Services v1.0 (ENARSI 300-410) exam is a 90-minute exam associated with the CCNP Enterprise and Cisco Certified Specialist - Enterprise Advanced Infrastructure Implementation certifications. This exam certifies a candidate's knowledge for implementation and troubleshooting for advanced routing technologies and services, including Layer 3 VPN services, Infrastructure security, Infrastructure services and Infrastructure automation.

Principles of Project Management 2B

During this module, students are introduced to Create plans at the level of detail that's right for your project. You can work with summary data initially and then shift to a more detailed approach when needed. Control what tasks Project can schedule automatically and which ones

you want to schedule manually. Manage tasks, resources, work, and costs at whatever level of detail is appropriate for your project's needs. Work with your plan's data in a variety of views and reports. Track and manage your plan throughout the life of the project. Collaborate and share data with others in your organisation. Use resource pools, consolidated projects, and cross-project links to extend your project-management focus across multiple projects.

Databases 2B

A candidate for this exam must have strong knowledge of data processing languages such as SQL, Python, or Scala, and they need to understand parallel processing and data architecture patterns. Azure Data Engineers help stakeholders understand the data through exploration, and they build and maintain secure and compliant data processing pipelines by using different tools and techniques. These professionals use various Azure data services and languages to store and produce cleansed and enhanced datasets for analysis.

Computer Systems 2B

Candidates for this exam are Microsoft 365 Enterprise Administrators who evaluate, plan, migrate, deploy, and manage Microsoft 365 services. They perform Microsoft 365 tenant management tasks for an enterprise, including its identities, security, compliance, and supporting technologies.

Networks 3A

During this module, students are introduced to various Azure cloud technologies, including implementing, managing, and monitoring identity, governance, storage, compute, and virtual networks in a cloud environment, plus provision, size, monitor, and adjust resources, when needed. An Azure administrator often serves as part of a larger team dedicated to implementing an organisation's cloud infrastructure.

ICT Trends 3A

During this module, students will learn how to: Create and manage SharePoint sites including the new modern team sites and community sites Apply best practice content management techniques with the new list and library apps Learn to efficiently and adequately manage site security Add and edit SharePoint pages and leverage the power of modern web parts Automate business processes with Power Automate (Flow) and Integrate Microsoft Office with your SharePoint sites.

Databases 3A

This module aims to provide students with practical knowledge of the industry in SQL databases by performing installation, maintenance, and configuration tasks. Other responsibilities include setting up database systems, making sure those systems operate efficiently, and regularly storing, backing up, and securing data from unauthorised access.

Computer Systems 3A

This module aims to provide students with practical knowledge of the industry Linux Operating System Environment. By the end of this module, students will

understand the fundamentals of the Linux operating system and be able to apply that knowledge in a practical and helpful manner.

Networks 3B

The module introduces the student to the fundamental's students need to prevent, detect, analyse, and respond to cybersecurity incidents. The Cisco CyberOps Associate certification is one of the industry's most respected certifications. There are no formal prerequisites for the CyberOps Associate certification. In other words, you do not have to pass any additional exams or certifications to take the 200-201 CBROPS exam.

ICT Trends 3B

This module aims to provide students with practical knowledge of the industry in DevOps Engineering with Azure. Responsibilities for this role include designing and implementing strategies for collaboration, code, infrastructure, source control, security, compliance, continuous integration, testing, delivery, monitoring, and feedback.

Databases 3B

The purpose of this module is to provide students with practical knowledge of database administrators and data management specialists that manage on-premises and cloud relational databases built with Microsoft SQL Server and Microsoft Azure Data Services. The Azure Database Administrator implements and manages the operational aspects of cloudnative and hybrid data platform solutions built on Azure Data Services and SQL Server. The Azure Database Administrator uses various methods and tools to perform day-to-day operations, including applying knowledge of using T-SQL for administrative management purposes.

Computer Systems 3B

Students are trained on IT operations during this module, including networking, virtualisation, identity, security, business continuity, disaster recovery, data platform, budgeting, and governance. This role should manage how decisions in each area affect an overall solution. In addition, this role should have expert-level skills in Azure administration and have experience with Azure development and DevOps processes.

Teaching and Learning Methodology

A blended teaching and Learning methodology is followed. All theory classes will be conducted Virtually through Lecturer-led interactive teaching on a national basis. A flipped classroom approach will be followed in some sessions. This means that students are introduced to content at home and practice working through it during the applicable session, either the virtual theory sessions or the practical sessions.

All students will be allocated to lecturers that are not necessarily based at the campus of enrollment but who will always be subject matter experts. CTU implements a national academic standard and all lecturers have been appointed

on the same criteria and use the same academic content in the teaching and learning process. The adherence to a national academic standard is monitored by the Academic Management team at the Head office. Therefore, all students will continue to receive the same quality of education.

Students will attend some practical, group, and research sessions on campus or virtually. The same work and time will be spent on both methods, face to face and VLIT, with students. Extra practical sessions can be booked at the campus with the Campus Operational Manager. Students will be expected to attend practical, group, and research classes on campus a minimum of two days a week, as per the campus schedule.

Textbooks and e-guides

A list of prescribed textbooks will be provided in your e-guides. Students will receive an electronic version of the academic guides (e-guides) for this programme on the Teaching and Learning platform. Access is available to an electronic library of textbooks on O'Reilly, and it is included in the fees.

Technology hardware, software and data requirements

A laptop is required to access the VLIT sessions, all study material, and complete assessments etc.

For additional information please consult the CTU Bring your own device guide. [Device Specifications and Stationery List.](#)

A minimum of 20 GB data per month (uncapped recommended) is required to access training material.

Student Support

Student support sessions with the facilitator will also take place on a one-on-one basis either virtually or physically at the campus per appointment or per the academic schedule.

Certification

On successful completion of the programme, the student will receive a Diploma in Information Technology in Network Design and Administration.

International Certifications

Included in price

- ▶ **Year 1:** N10-008 CompTIA Network+ Certification
- ▶ **Year 2:** MS-102: Microsoft 365 Administrator
- ▶ **Year 3:** AZ-104 Microsoft Certified: Azure Administrator Associate

Students own account

Year 1:

- ▶ C01* AWS Cloud Practitioner
- ▶ MD-102* Endpoint Administrator
- ▶ CCNA200-301* Implementing and Administering Cisco Solutions (CCNA)

Year 2:

- ▶ ENCOR350-401* Implementing and Operating Cisco Enterprise Network Core Technologies
- ▶ ENARSI 300-410* Implementing Cisco Enterprise Advanced Routing and Services
- ▶ DP-203* Data Engineering on Microsoft Azure

Year 3:

- ▶ Linux XK0-005* CompTIA Linux+ Certification
- ▶ Oracle Database *12c SQL 1Z0-071 *Oracle Database 12c Administrator Certified Associate
- ▶ AZ305* Designing Microsoft Azure Infrastructure Solutions
- ▶ 200-201 CBROPS* CyberOps Associate certification
- ▶ DP-300* Microsoft Certified: Azure Database Administrator Associate
- ▶ AZ-400* Designing and Implementing Microsoft DevOps

Further studies

Students may pursue further studies in Bachelors Degree in Information Technology at an accredited institution of Higher Education. Admission to further your studies at a different institution remains the prerogative of each institution and its academic council.

Career fields

Students can be employed in the following career fields:

- ▶ Network Engineer
- ▶ Databases Administrator
- ▶ Linux System Administrator
- ▶ Network Solutions Architect
- ▶ Network Specialist
- ▶ Data Engineer

- ▶ Cloud Administrator
- ▶ IT Project Manager
- ▶ IT Manager
- ▶ Microsoft/Office 365 Specialist
- ▶ Cloud Infrastructure Engineer

Pricing*

Diploma in Information Technology Network Design and Administration

Programme	Registration Fees	Tuition fee
Year 1	R9 000	R62 000
Year 2	R9 000	R65 100
Year 3	R9 000	R68 355

* Excludes external fees and identified textbooks if applicable.

* Prices are subject to annual adjustments.

Payment

Visit our website to view the payment method. [Payment Methods.](#)

[APPLY for Student Loan HERE!](#)

Additional costs

Students must make provision for additional items such as textbooks, stationery, supplementary examinations, research costs and printing, field trips etc.

Disclaimer

The content of this fact sheet is subject to change without notification due to market trends in the industry, legislation and/or programme version updates. Refer to website for the latest version of the prospectus. Creative & Technology Universitas, a division of CTU Training Solutions (PTY) Ltd, reserves the right to change the programme content without prior notice. Additional international exams may be written but are not included in the programme fee. Minimum student (capacity) group sizes will fall into the Virtual Instructor-Led programme commencing in the months of February & July of each year.

I (Name of student):..... hereby acknowledge that I understand the information stated in this document and fully comprehend the specifics explained above pertaining to this qualification.

Student signature:.....

Signature of legal guardian:.....

Name of legal guardian:.....

Consultant signature:.....

Name of sales consultant:.....

Date:.....

* Please note the original signed copy should be kept on the student record file.

CONTACT US

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