

POSTGRADUATE DIPLOMA IN INFORMATION TECHNOLOGY

PGDip (Information Technology) - NQF Level 8 (120 credits)

Qualification code: PDIT21

SAQA ID: 110062, CHE NUMBER: H/H16/E171CAN

Campus where offered:

Soshanguve South Campus

REMARKS

a. Admission requirement(s):

An Advanced Diploma in Information Technology in the field of Computer Networks or Cyber Security, **or** a Baccalaureus Technologiae: Information Technology in the field of Communication Networks or Support Services, **or** a relevant bachelor's degree, **or** an equivalent qualification at NQF Level 7 with specialisation in Computer Networks or Cyber Security. Preference will be given to candidates who obtained an average of 60% in the previous qualification.

Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.

b. Selection criteria:

Admission is subject to selection. Candidates are evaluated based on the previous qualification obtained and/or work experience.

Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP). Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, www.tut.ac.za.

c. Recognition of Prior Learning (RPL), equivalence and status:

See Chapter 30 of Students' Rules and Regulations.

d. Intake for the qualification:

January only.

e. Presentation:

Day classes offered on Saturdays over a period of two years. Online classes are also offered in some instances, but assessments are on campus.

f. Duration:

A minimum of one or two years (depending on the programme offering).

g. Exclusion and readmission:

See Chapter 2 of Students' Rules and Regulations.

h. Re-registration:

A student may re-register for the module Network Research Project V only with the permission of the Head of the Department. The purpose of the re-registration is to provide students with an opportunity to complete the project only, and not to redo it, should they fail the module.

i. Personal equipment:

Access to a laptop or desktop computer is essential to participate in multimodal learning experiences as well as to complete assignments and projects. NSFAS students receive an allowance to acquire a laptop, and using this allowance for this purpose is critical for academic success. Students are encouraged to consult the faculty website where the minimum requirements for specific programmes are published.



CURRICULUM

ATTENDANCE (FIRST OR SECOND YEAR)

Modules are offered as determined by the Head of the Department.

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
NWR108G	Network Research Project V	(8)	(15)	Principles of Research V
NWR118R	Network Research Project V (re-registration) (first-semester module, see paragraph h)	(8)	(0)	

FIRST SEMESTER

PIT118G	Principles of Research V	(8)	(15)	
SCN118G	Social Engineering and New Trends in Networks	(8)	(15)	

plus one of the following electives:

CN2118G	Computer Networks 502	(8)	(15)	Computer Networks 501
CRG118G	Cryptography 502	(8)	(15)	Computer Security 501

plus one of the following electives:

NWA118G	Network Management 501	(8)	(15)	
SPG118G	Security Policy and Governance 501	(8)	(15)	

SECOND SEMESTER

DFO118G	Digital Forensics V	(8)	(15)	
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plus one of the following electives:

CN1118G	Computer Networks 501	(8)	(15)	
CSY118G	Computer Security 501	(8)	(15)	

plus one of the following electives:

EHA118G	Ethical Hacking 502	(8)	(15)	Computer Security 501
SDN118G	Software Defined Networks 502	(8)	(15)	Computer Networks 501

TOTAL CREDITS FOR THE QUALIFICATION: **120**

MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. At time of publication, the syllabus content was defined as follows:

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COMPUTER NETWORKS 501 (CN1118G)

1 X 3-HOUR PAPER

(Module custodian: Department of Information Technology)

The general purpose of this module is to provide students with the Internet and Computer networks in general, different WAN technologies used to accomplish different communication tasks, network security and applications. The emphasis is on equipping the students to be competent problem solvers that can originate and recommend computer network strategies. (Total notional time: 150 hours)



COMPUTER NETWORKS 502 (CN2118G)**1 X 3-HOUR PAPER***(Module custodian: Department of Information Technology)*

The general purpose of this module is to provide students with the necessary tools and techniques to design and implement networks. The emphasis is on equipping the students to be competent problem solvers that can originate and recommend computer network strategies. (Total notional time: 150 hours)

COMPUTER SECURITY 501 (CSY118G)**1 X 3-HOUR PAPER***(Module custodian: Department of Information Technology)*

The emphasis of this module is on equipping the students to be competent problem solvers that can originate and recommend security strategies. (Total notional time: 150 hours)

CRYPTOGRAPHY 502 (CRG118G)**1 X 3-HOUR PAPER***(Module custodian: Department of Information Technology)*

The emphasis of this module is on equipping the students to be competent problem solvers that can originate and recommend Cryptography Terminologies. (Total notional time: 150 hours)

D**DIGITAL FORENSICS V (DFO118G)****1 X 3-HOUR PAPER***(Module custodian: Department of Information Technology)*

The general purpose of this module is to provide students with the internet and computer digital forensics, principles and methodologies of digital forensics, software and hardware digital forensics tools. The emphasis is on equipping the students to be competent problem solvers that can originate and recommend digital forensics strategies. (Total notional time: 150 hours)

E**ETHICAL HACKING 502 (EHA118G)****1 X 3-HOUR PAPER***(Module custodian: Department of Information Technology)*

The student will learn the basics of ethical and moral technology hacking. The module teaches the student how to find weak points and compositional errors in computer networks and systems. (Total notional time: 150 hours)

N**NETWORK MANAGEMENT 501 (NWA118G)****1 X 3-HOUR PAPER***(Module custodian: Department of Information Technology)*

The general purpose of this module is to provide students with an overview of network management, this includes an understanding of the building blocks of network management with its associate remote networking tools that can be applied to network infrastructures. (Total notional time: 150 hours)

NETWORK RESEARCH PROJECT V (NWR108G, NWR118R)**PROJECT ASSESSMENT***(Module custodian: Department of Information Technology)*

This module summarises learnings of student registered for the postgraduate diploma into a research project. The student will learn how, and when, to use quantitative and qualitative techniques to investigate different research questions. The student will practice and apply these techniques by producing research questions, conducting literature reviews, data collection, analysis and interpretation, including the use of specialist computer packages. (Total notional time: 150 hours)

P**PRINCIPLES OF RESEARCH V (PIT118G)****CONTINUOUS ASSESSMENT***(Module custodian: Department of Information Technology)*

The general purpose of this module is to prepare the student to investigate and analyse a research problem using introductory research methods and tools that are commonly used in computing and related research fields. The module will also enable participants to formulate, define research problems and questions, critically review the literature, research designs and reported research findings, evaluate and select appropriate research methods and data collection techniques for formulating ethical research proposals. (Total notional time: 150 hours)



SECURITY POLICY AND GOVERNANCE 501 (SPG118G)**1 X 3-HOUR PAPER*****(Module custodian: Department of Information Technology)***

The emphasis is on equipping the students to implement computer security governance process and procedure and recommend security strategies. (Total notional time: 150 hours)

SOCIAL ENGINEERING AND NEW TRENDS IN NETWORKS (SCN118G)**1 X 3-HOUR PAPER*****(Module custodian: Department of Information Technology)***

The general purpose of this module is to provide students with an overview of social engineering techniques and countermeasures as well as ethical, privacy and security issues in the online social network ecosystem. (Total notional time: 150 hours)

SOFTWARE DEFINED NETWORKS 502 (SDN118G)**1 X 3-HOUR PAPER*****(Module custodian: Department of Information Technology)***

The content of this module includes examining the structure and capabilities of commercial and open source controllers whereby a detailed information on constructing and maintaining a software defined network infrastructure is explained. (Total notional time: 150 hours)

