

## ADVANCED DIPLOMA IN INFORMATION TECHNOLOGY

AdvDip (Information Technology) - NQF Level 7 (120 credits)

Qualification code: **ADIT21**

SAQA ID: 117676, CHE NUMBER: H/H16/E158CAN

Campus where offered:

Soshanguve South Campus

### REMARKS

*a. Admission requirement(s):*

A Diploma in Information Technology, **or** a National Diploma Information Technology in the field of Communication Networks or Support Services, **or** a relevant bachelor's degree, **or** an equivalent qualification at NQF Level of 6 with a minimum of 360 credits. Prospective students are required to have advanced knowledge of Communication/Computer Networks and Cyber/Computer Security.

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. Prospective students will be evaluated based on the marks obtained in the previous qualification 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](http://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. Minimum 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 Research Project IV 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)
<b>FIRST SEMESTER</b>				
NWG117V	Network Management IV	(7)	(15)	
NWP117V	Network Applications IV	(7)	(15)	
PIT117V	Principles of Research	(7)	(15)	
SAM117V	System Administration and Maintenance IV	(7)	(15)	
<b>SECOND SEMESTER</b>				
RIT117V	Research Project IV	(7)	(15)	Principles of Research
RIT117R	Research Project IV (re-registration) (first-semester module, see paragraph h)	(7)	(0)	
WNE117V	Wireless Networks IV	(7)	(15)	
<b>Plus one of the following electives:</b>				
PNA117V	Computer Networks IVA	(7)	(15)	
SEA117V	Computer Security IVA	(7)	(15)	
<b>Plus one of the following electives:</b>				
PNB117V	Computer Networks IVB	(7)	(15)	Computer Networks IVA
SEB117V	Computer Security IVB	(7)	(15)	Computer Security IVA
TOTAL CREDITS FOR THE QUALIFICATION:			<b>120</b>	

## 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:

### C

#### COMPUTER NETWORKS IVA (PNA117V)

**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 protocols 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 IVB (PNB117V)

**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. EtherChannel, Spanning-tree and WAN technologies is covered. (Total notional time: 150 hours)



**COMPUTER SECURITY IVA (SEA117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Information Technology)**

The general purpose of this module is to provide students with knowledge of cyber security principles and tools used to protect network security, Client-side technologies used in applications and manage security applications using applicable tools. (Total notional time: 150 hours)

**COMPUTER SECURITY IVB (SEB117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Information Technology)**

The general purpose of this module is to provide students with knowledge of wireless and mobile device, network security, applications security tools and computer security risk mitigation. (Total notional time: 150 hours)

**N****NETWORK APPLICATIONS IV (NWP117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Information Technology)**

The general purpose of this module is to provide students with knowledge on how to analyse web-based protocols, understanding efficiency of web search, deployment of web-based applications and understanding of database-driven websites. (Total notional time: 150 hours)

**NETWORK MANAGEMENT IV (NWG117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Information Technology)**

The general purpose of this module is to provide students with knowledge of computer network management techniques, network management protocols and network management tools. (Total notional time: 150 hours)

**P****PRINCIPLES OF RESEARCH (PIT117V)****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)

**R****RESEARCH PROJECT IV (RIT117V/R)****PROJECT ASSESSMENT****(Module custodian: Department of Information Technology)**

The module demonstrates research and writing skills according to the project topics and research problem, in line with the department niche area. (Total notional time: 150 hours)

**S****SYSTEM ADMINISTRATION AND MAINTENANCE IV (SAM117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Information Technology)**

The general purpose of this module is to provide students with knowledge for deployment and maintenance of modern computer systems, with particular emphasis on the administration of user accounts. Do administrative tasks associated with network operating systems such as Windows and Linux, and how to use deployment tools and solutions e.g. hardware, applications and software and security updates. (Total notional time: 150 hours)

**W****WIRELESS NETWORKS IV (WNE117V)****1 X 3-HOUR PAPER****(Module custodian: Department of Information Technology)**

The content of this module includes the illustration of how email and other traffic are routed using mobile IP and the implementation of simple application that relies on mobile and wireless data communications. Software package support for mobile and wireless computing. Performance issues of wireless local area networks. (Total notional time: 150 hours)

