Bachelor of Science (Hons) in Network Security and Computer Forensics

The Bachelor of Science (Honours) in Network Security and Computer Forensics is targeted at those wishing to enter the Information Technology (IT) sector as Computer Forensic Analysts, Vulnerability Security Research Engineers, Digital Forensic Examiners, Malware Media Forensic Analysts, Forensic Auditors, Network Security Specialists, Computer Crime Investigators or Security Analysts, among other things.

Programme details:
The programme consists of core (required) and elective modules as detailed below. Some modules may have pre-requisites (i.e. may require the student to pass another module or set of modules first). Some modules may be co-requisite (i.e. such modules are required to be taken together). The number at the end of the module in parenthesis indicates the credit load of the module. 1 credit is equal to 10 hours of learning (guided, in-class and independent combined); therefore a 10-credit module requires on average 100 hours of learning from the student.

Core modules:
- C5 - ICO - 11:Introduction to Computers (20)
- C5 - MAT - 11: Mathematics for Computing (20)
- D5 - CSS - 14: Communication & Study Skills (20)
- C5 - CSA - 11: Computer Systems Architecture (20)
- C5 - OSH - 11: Operating Systems & Hardware (20)
- C6 - IPC - 11: Introduction to programming using C++ (20)
- C6 - QMD - 11: Querying & Managing Database (40)
- C6 - FNS - 13: Fundamentals of Network Security (20)
- C6 - LIE - 19: Linux Essentials (20)
- C7 - IDS - 13: Information and Data Security (20)
- C6 - CFD - 13: Computer Forensics and Data Recovery (20)
- C7 - JAV - 11: Programming using Java (20)
- C7 - PCS - 19 Principles of Cyber Security (20)
- C7 - BIF - 13: Biometric Fundamentals (20)
- C7 - NH1 - 11: Managing Network Hardware 1 (20)
- C7 - EHK - 13: Ethical Hacking (20)
- C7 - CYL - 17: Cyber Law (20)
- C7 - PPR - 11: Professional Practice (60)
- C8 - NH2 - 11: Managing Network Hardware 2 (20)
- C8 - MAN - 13: Malware Analysis (20)
- C8 - PRO - 11: Project (40)

Electives
- C8 - CCI - 13 Cyber Crime Investigation (20) or C8 - WNA - 13 Windows Network Administration (20)
- B8 - ENT - 20 : Essentials of Entreprenuership
- C8 - APD - 20 : Analytical Product Design
- E8-ISD-18: Innovation for Sustainable Development

Semester 1:
- C5 - ICO - 11, C5 - MAT - 11, D5 - CSS - 14

Semester 2:
- C5 - CSA - 11,C5 - OSH - 11, C6 - IPC - 11

Semester 3:
- C6 - QMD - 11, C7 - NH1 - 11

Semester 4:
- C6 - CFD - 13, C6 - LIE - 19, C6 - FNS - 13

Semester 5:
- C7 - JAV - 11, C7 - PCS - 19, C7 - BIF - 13

Semester 6:
- C7 - EHK - 13, C7 - CYL - 13, C7 - IDS -19

Semester 7:
- C7 - PPR - 11,

Semester 8:
- C8 - NH2 - 11, C8 - MAN - 13
- Elective (one of C8 - WNA - 13, C8 - CCI - 13)

Semester 9:
- C8 - PRO - 11, Elective (E8 - ISD - 18, B8 - ENT - 13,C8 - APD 20)

*The programmes offered in this document are accredited by BQA and offered at Botho University at the time of print. Please refer to your offer letter from the admissions department for any changes in programme name or duration that may occur due to regulatory requirements.

Admissions Criteria

1) Applicants are expected to have successfully completed secondary schooling. The typical entry requirement is BGCSE or IGCSE (in Botswana), LGCSE (in Lesotho) or other equivalent secondary school qualification.

2) BGCSE/equivalent with minimum Pass (D) in 5 subjects including English and Mathematics.

3) Applicants in possession of a Diploma or Higher Diploma in related field may be given exemptions based on the credit point equivalency.

4) For enquiries and more information please visit our website: **www.bothouniversity.com**

Bachelor of Science (Hons) in Computing

Programme details:

The programme consists of core (required) and elective modules as follow. Some modules may have pre-requisites (i.e. may require the student to pass another module or set of modules first). The number at the end of the module in parenthesis indicates the credit load of the module. 1 credit is equal to 10 hours of learning (guided, in-class and independent combined); therefore a 10-credit module requires on average 100 hours of learning from the student. B.Sc. (Hons) in Computing has three specialisation areas including: Software Engineering (SE), Network & Infrastructure Management (NW&IM) and General.

Core modules:

- C6-DMA-19: Discrete Mathematics (20)
- D5-CSS-14: Communication and Study Skills (20)
- C5 - ICO - 11: Introduction to Computers (20)
- C5 - MAT - 11: Mathematics for Computing (20)
- C5 - CSA - 11: Computer System Architecture (20)
- C5 - OSH - 11: Operating Systems & Hardware (20)
- C6 - QMD - 11: Querying and Managing Databases (40)
- C6 - IPC - 11: Introduction to Programming using C++ (20)
- C6 - DMO - 11: Database Management using Oracle (20)
- C6 - LIE - 19: Linux Essentials (20)
- C6 - WDD - 11: Web Design and Development (20)
- C7 - JAV - 11: Programming using Java (20)
- C7 - MD2 - 11: Managing Business Desktops 2 (20)
- C7 - ITP - 11: IT Project Management (20)
- C7 - DSA - 11: Data Structures and Algorithms (20)
- C7 - ADJ - 11: Advanced Java (20)
- C7 - NH1 - 11: Managing Network Hardware 1 (20)
- C7 - WN1 - 11: Windows Network Administration 1 (20)
- C7-PPR-11: Professional Practice (60)
- C7 - SEN - 11: Software Engineering
- C8 - IDE - 11: Interaction Design (20)
- C8 - LNA - 11: Linux Network Administration (20)
- C8 - NH2 - 11: Managing Network Hardware 2 (20)
- C8 - WN2 - 11: Windows Network Administration 2 (20)
- C8 - PRO - 11: Project (40)

Elective modules:

- C7 - PN1 - 11: Programming using .Net 1 (20)
- C7 - CP1 - 11: Designing Creative Publications 1(20)
- C7 - MD2 - 11: Managing Business Desktops(20)
- C8 - MAD - 11: Mobile ApplicationDevelopment (20)
- C8 - 3DA - 14: 3D Design and Animation (20)
- C8 - AIN - 19 : Artificial Intelligence (20)
- C8 - CP2 - 11: Designing Creative Publications 2 (20)
- C8 - PN2 - 11: Programming using .Net 2 (20)
- C8 - CLC - 19: Cloud Computing (20)
- B8 - ENT -13: Essentials of Entrepreneurship (20)
- E8 - ISD - 18: Innovation for Sustainable Development (20)
- C8 - APD -20 : Analytical Product Design

Recommended full-time study path for Software Engineering specialisation (4½ years):

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Program Version Course List

14-07-2022

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
NCF-8BH-19	**Bachelor of Science (Honours) in Network Security and Computer Forensics**			**Weeks:234.00 Credits: 540.00**			
Core							
C5-CSA-11	Computer System Architecture	20.00					
C5-ICO-11	Introduction to Computers	20.00					MSOF10 - Microsoft Office 2010
C5-MAT-11	Mathematics -I	20.00					
C5-OSH-11	Operating Systems and Hardware	20.00					STDOS - Standard OS
C6-WPC-17	Workshop on Programming using C++	0.00					TURC++ - Turbo C++
C7-CYL-17	Cyber Law	20.00					
C7-IDS-19	Information and Data Security	20.00					
C7-PPR-11	Professional Practice	60.00					
D1-FYE-16	BGP workshops	0.00					
D5-CSS-14	Communication and Study Skills	20.00					
C6-QMD-11	Querying and Managing Databases	40.00		C5-ICO-11 - Introduction to Computers			MSSQL12 - Microsoft SQL server 2012
C6-IPC-11	Introduction to Programming Using C++	20.00		C5-MAT-11 - Mathematics -I			TURC++ - Turbo C++, MSOF10 - Microsoft Office 2010
C6-CFD-13	Computer Forensics and Data recovery	20.00		C5-OSH-11 - Operating Systems and Hardware			XWAYS - X-Ways
C6-FNS-13	Fundamentals of Network Security	20.00		C5-OSH-11 - Operating Systems and Hardware			WRSHRK - Wireshark, WRSHRK - Wireshark

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
C6-LIE-19	Linux Essentials	20.00		C5-OSH-11 - Operating Systems and Hardware			
C7-NH1-11	Managing Network Hardware 1	20.00		C5-OSH-11 - Operating Systems and Hardware			CSCROT - Cisco Routers, CISSWI - Cisco Switches, MSOF10 - Microsoft Office 2010
C7-BIF-13	Biometric Fundamentals	20.00		C6-FNS-13 - Fundamentals of Network Security			
C7-EHK-13	Ethical Hacking	20.00		C6-FNS-13 - Fundamentals of Network Security			NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, NESSVR - Nessus Server 2008/12, VMWARE - VMWare, ZENMAP - ZenMap, ZENMAP - ZenMap, OPEVPN - OpenVPN, KALINX - Kali linux, MATRIU - Matriux, MSBSA - MS Baseline Security Analyzer, HTTRA - HTTrack

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
C7-PCS-19	Principles of Cyber Security	20.00		C6-FNS-13 - Fundamentals of Network Security			
C7-JAV-11	Programming Using JAVA	20.00		C6-IPC-11 - Introduction to Programming Using C++C5-ICO-11 - Introduction to Computers			NBEN8.1 - Netbeans 8.1
C8-MAN-13	Malware Analysis	20.00		C7-EHK-13 - Ethical Hacking			
C8-NH2-11	Managing Network Hardware 2	20.00		C7-NH1-11 - Managing Network Hardware 1			CIPT6.3 - CISCO Packet tracer 6.3, CISSWI - Cisco Switches, CISSWI - Cisco Switches
C8-PRO-11	Project	40.00		C7-PPR-11 - Professional Practice			
23		**500.00**					
Elective							
ELEC	Elective	20.00	C8-WNA-13 - Windows Network Administration, C8-CCI-13 - Cyber Crime Investigation			C5-OSH-11 - Operating Systems and Hardware, C6-CFD-13 - Computer Forensics and Data recoveryC7-BIF-13 - Biometric Fundamentals	
ELEC	Semester 9 Electives	20.00	B8-ENT-13 - Essentials of Entrepreneurship, E8-ISD-18 - Innovation for Sustainable Development, C8-APD-20 - Analytical Product Design				
2		**40.00**					
25		**540.00**					

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList