

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)

Elective Modules:

- C8 - CCI - 13 Cyber Crime Investigation (20)
- C8 - WNA - 13 Windows Network Administration (20)
- B8 - ENT - 13 : Essentials of Entrepreneurship (20)
- 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)

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



Program Version Course List



14-07-2022

| <u>Course Code</u> | <u>Course Description</u> | <u>Credits</u> | <u>Elective List</u> | <u>Pre-Requisite List</u> | <u>Co-Requisite List</u> | <u>PreElect</u> | <u>ResourceList</u> |
|--------------------|---|----------------|----------------------|--|--------------------------|-----------------|--|
| 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 |

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|--------------------|-----------------------------|----------------|----------------------|--|--------------------------|-----------------|--|
| 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, 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 |

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|--------------------|------------------------------|----------------|---|--|--------------------------|---|---|
| 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-1 3 - 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 | | | | | |

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