

## Bachelors of Science in Network Security and Computer Forensics

### 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-CE1-20: Computer and its Essentials 1 (10)
- C5-PLD-20: Programming Logic and Design (10)
- C5-MAT-20: Mathematics (10)
- C5-OSH-11: Operating System and Hardware (20)
- C6-PIE-20: Professional Issues and Ethics (10)
- C6-NEF-20: Networking Fundamentals (20)
- C6-DBC-20: Database Concepts (10)
- D6-AST-20: Academic Writing for STEM (10)
- C6-CE2-20: Computer and its Essentials 2 (10)
- C6-EOL-20: Essentials of Linux (10)
- C6-CFO-23: Computer Forensics (10)
- C6-PUC-20: Programming using C++ (20)
- C6-CFO-23: Computer Forensics Lab (10)
- C6-RSW-20: Routing and Switching (10)
- C6-RSL-20: Routing and Switching Lab (10)
- C7-SCS-23: Scripting for Cyber Security (20)
- C6-PCS-23: Principles of Cyber Security (10)
- C6-OSF-23: Operating System Forensics (10)
- C6-NSE-20: Network Security (10)
- C7-WMS-23: Wireless and Mobile Security (10)
- C7-IDS-23: Information and Data Security (10)
- C7-EHK-13: Ethical Hacking (20)

- C7-SDN-23: Software Defined Network Engineering (10)
- C7-FIT-23: Forensics Investigation Techniques (10)
- C7-CGT-23: Cryptographic Techniques (10)
- C7-RMS-20: Research Methods for STEM (10)
- C7-MAN-13: Malware Analysis (20)
- C7-AEH-23: Advanced Ethical Hacking (10)
- V-C7-MFO-23: Mobile Forensics (10)
- C8-CCI-23: Cyber Crime Investigation (10)
- C7-RP1-20: Research Project 1: Proposal Writing (10)
- C7-CYL-23: Cyber Law (10)
- B8-ENT-13: Essentials of Entrepreneurship (20)
- C8-RP2-20: Research Project 2: Dissertation (20)
- C7-PRC-20: Professional Practice in Computing (40)

### Elective Modules:

- C7-IOT-23: Internet of Things (10)
- C7-CCS-20: Cloud Computing and Security (10)
- C7-SDE-20: Security by Design (10)
- C8-MAS-20: Media and Storage (10)
- C8-MEF-23: Media Forensics (10)
- C8-ISG-23: Information Security Management and Governance (10)

### Recommended full-time study path (4 years):

#### Semester 1:

- C5-CE1-20, C5-PLD-20, C5-MAT-20, C5-OSH-11, C6-PIE-20

#### Semester 2:

- C6-NEF-20, C6-DBC-20, D6-AST-20, C6-CE2-20, C6-EOL-20

#### Semester 3:

- C6-CFO-23, C6-PUC-20, C6-CFO-23, C6-RSW-20, C6-RSL-20

#### Semester 4:

- C7-SCS-23, C6-PCS-23, C6-OSF-23, C6-NSE-20, C7-WMS-23

#### Semester 5:

- C7-IDS-23, C7-EHK-13, C7-SDN-23,

## FACULTY OF ENGINEERING AND TECHNOLOGY (CONTINUED)

C7-FIT-23, C7-CGT-23

**Semester 6:**

•C7-RMS-20, C7-MAN-13, C7-AEH-23, C7-MFO-23, Elective Select any one (C7-IOT-23, C7-CCS-20, C7-SDE-20)

**Semester 7:**

•C8-CCI-23, C7-RP1-20, C7-CYL-23, B8-ENT, Elective Select any one (C8-MAS-20, C8-MEF-23, C8-ISO-23)

**Semester 8:**

•C8-RP2-20, C7-PRC-20

### Admissions Criteria

**1)** SGCSE/equivalent with minimum Credit (C) in 5 subjects including English and Mathematics.

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

**3)** 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>
<b>NCF-8BH-19</b>	<b>Bachelor of Science (Honours) in Network Security and Computer Forensics</b>			Weeks:234.00 Credits: 540.00			
<b>Core</b>							
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, VMWARE - VMWare, ZENMAP - ZenMap, ZENMAP - ZenMap, OPEVPN - OpenVPN, KALINX - Kali linux, MATRIU - Matriux, MSBSA - MS Baseline Security Analyzer, HTTRA - HTTrack

14-07-2022

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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			
<b>23</b>		<b>500.00</b>					
<b>Elective</b>							
*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				
<b>2</b>		<b>40.00</b>					
<b>25</b>		<b>540.00</b>					

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