

## BSc (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 - VN1 - 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)

### Elective for Semester - 9:

Select one from the following:

- 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):

#### Semester 1:

#### Semester 2:

- C5 - CSA - 11, C5 - OSH - 11, C6 - DMA - 19

**Semester 3:**

- C6 - QMD - 11, C6 - IPC - 11

**Semester 4:**

- C6 - DMO - 11, C6 - LIE - 19, C6 - WDD - 19

**Semester 5:**

- C7 - JAV - 11, C7 - SEN - 11, Elective: Select any one C7 - PN1 / C7 - CP1)

**Semester 6:**

- C7 - ITP - 11, C7 - DSA - 11, C7 - ADJ - 11

**Semester 7:**

- C7 - PPR - 11

**Semester 8:**

- C8 - IDE - 11, First Elective: Select any one (C8 - AIN - 19/C8 - MAD - 11/ C8 - 3DA - 14), Second Elective: Select any one (C8 - CP2 - 11/C8 - PN2 - 11/ C8 - CLC - 19)

**Semester 9:**

- C8 - PRO - 11

Elective: Select any one  
(B8 - ENT - 13, E8 - ISD - 18  
C8 - APD - 20)

**Recommended full-time study path for  
Network & Infrastructure Management  
specialisation (4½ years):**

**Semester 1:**

- C5 - ICO - 11, C5 - MAT - 11, D5 - CSS - 14

**Semester 2:**

- C5 - CSA - 11, C5 - OSH - 11, C6 - DMA - 19

**Semester 3:**

- C6 - QMD - 11, C6 - IPC - 11

**Semester 4:**

- C6 - DMO - 11, C6 - LIE - 19, C6 - WDD - 19

**Semester 5:**

- C7 - JAV - 11, C7 - NH1 - 11, C7 - MD2 - 11

**Semester 6:**

- C7 - ITP - 11, C8 - NH2 - 11, C7 - WN1 - 11

**Semester 7:**

- C7 - PPR - 11

**Semester 8:**

- C8 - LNA - 11, C8 - WN2 - 11
- Elective: Select any one: (C8 - AIN - 19,  
C8 - CLC - 19)

**Semester 9:**

- C8 - PRO - 11, Elective (one of B8 - ENT - 13, E8 - ISD - 18, C8 - APD - 20)

**Recommended full-time study path for  
General specialisation (4½ years):**

**Semester 1:**

- C5 - ICO - 11, C5 - MAT - 11, D5 - CS5 - 14

**Semester 2:**

- C5 - CSA - 11, C5 - OSH - 11, C6 - DMA - 19

**Semester 3:**

- C6 - QMD - 11, C6 - IPC - 11

**Semester 4:**

- C6 - DMO - 11, C6 - LIE - 11, C6 - WDD - 19

**Semester 5:**

- C7 - JAV - 11, C7 - SEN - 11 Select one from Software (C7 - PN1-11/C7-CP1-11) Networking (C7 - MD2 -11/ C7-NH1-11)

**Semester 6:**

- C7 - ITP - 11, Select one from Software (C7 - DSA - 11/C7 - ADJ - 11) , Select one from Networking (C8-NH2-11/C7-WN1-11)

**Semester 7:**

- C7 - PPR - 11

**Semester 8:**

- C8 - IDE - 11, Select one from Software (C8 - MAD - 11/C8 - 3DA - 14/ C8 - CP2 - 11/ C8 - PN2 - 11) and Select one from Networking (C8 - AIN - 19/C8 - CLC - 19/ C8 - LNA - 1/C8 - WN2-11)

**Semester 9:**

- C8 - PRO - 11, Elective (one of 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)** LGCSE/equivalent with a minimum of 5 subjects of which 3 Credits (C), 2 Pass (D) including minimum Pass (D) in English, Pass (D) in 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](http://www.bothouniversity.com)

## **BSc (Hons) in Mobile Computing**

### **Programme details:**

The programme consists of core (required) and elective modules as follows. 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 1 (20)
- C5 - CSA - 11: Computer Systems Architecture (20)
- C5 - OSH - 11: Operating Systems and Hardware (20)
- C6-DMA-19: Discreet Mathematics (20)
- C6 - QMD - 11: Querying and Managing Databases (40)
- C6-DCN-19: Data Communications and Data Networking (20)
- C6-LIE-19 :Linux Essentials (20)
- C6 - IPC - 11: Introduction to Programming using C++ (20)
- C6-WDD-19 : Web Design and Development (20)
- C6 - MDC - 13: Mobile Communications (20)
- C7 - JAV - 11: Programming Using Java (20)
- C7-MDC-19 : Mobile Data Communications (20)
- C7 - MOS - 13: Mobile Operating Systems (20)
- C7 - WNM - 13: Wireless Networks and Mobile System Architecture (20)
- C7 - MDP - 13: Mobile Device Programming (20)
- C7-MTE-13: Mobile Technologies(20)
- C7 - PPR - 11: Professional Practice in Computing (60)
- C8 - MID - 13: Mobile Interaction Design (20)
- C8-WMS-19: Wireless and Mobile Network Security(20)
- C8 - PRO - 11: Project (40)

### **Elective modules:**

#### **Select Two from the following:**

- C8 - DIS - 13: Distributed Systems (20)
- C8- MIA- 13: Mobile INternet Applications and Services

Program Version Course List



Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
COM-8BH-19 Bachelor of Science (Honours) in Computing			Weeks :234.00 Credits :540.00				
Core							
B8-ENT-13	Essentials of Entrepreneurship	20.00					
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-DMA-19	Discrete Mathematics	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-WDD-19	Web Design and Development	20.00		C5-ICO-11 - Introduction to ComputersC6-CE2-20 - Computer and its Essentials 2			
C7-SEN-11	Software Engineering	20.00		C5-ICO-11 - Introduction to ComputersC6-CE2-20 - Computer and its Essentials 2			
C7-ITP-11	IT Project Management	20.00		C5-ICO-11 - Introduction to ComputersC7-SEN-11 - Software Engineering			MSVI03 - Microsoft Visio 2003, MSPRJ03 - Microsoft Projects 2003
C6-IPC-11	Introduction to Programming Using C++	20.00		C5-MAT-11 - Mathematics -I			TURC++ - Turbo C++, MSOF10 - Microsoft Office 2010
C6-LIE-19	Linux Essentials	20.00		C5-OSH-11 - Operating Systems and Hardware			
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
C7-DSA-11	Data Structure and Algorithms	20.00		C6-IPC-11 - Introduction to Programming Using C++C6-PUC-20 - Programming using C++			TURC++ - Turbo C++, NBMWCR - NETBEANS with MINGW (COMPILER)
C6-DMO-11	Database Management Using Oracle	20.00		C6-QMD-11 - Querying and Managing Databases			MSSQLD - Microsoft SQL Developer, MSSQLD - Microsoft SQL Developer
C8-PRO-11	Project	40.00		C7-PPR-11 - Professional Practice			
C8-IDE-11	Interaction Design	20.00		C7-SEN-11 - Software EngineeringC6-WCD-11 - Web Content Development			
20		460.00					
20		460.00					

<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>
<u>NIM-8BH-13</u> <u>Bachelor of Science (Honours) in Computing - Top-Up Year (NIM)</u>				<b>Weeks :53.00</b> <b>Credits :120.00</b>			
Core							
D1-FYE-16	BGP workshops	0.00					
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
C6-DMO-11	Database Management Using Oracle	20.00		C6-QMD-11 - Querying and Managing Databases			MSSQLD - Microsoft SQL Developer, MSSQLD - Microsoft SQL Developer
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			
Elective							
*ELEC*	Semester 9 Electives	20.00	B8-ENT-13 - Essentials of Entrepreneurship, E8 -ISD-18 - Innovation for Sustainable Development				
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6		120.00					
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