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 Engineering (Hons) in Computer Engineering

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 - MAT - 11 Mathematics-1 (20)
- E5 - PH1 - 14 Physics-1 (10)
- E5 - PL1 - 14 Physics -1 Laboratory (10)
- E5 - GCH - 14 General Chemistry (10)
- E5 - GCL - 14 General Chemistry Laboratory (10)
- C5 - ICO - 11 Introduction to Computers(20)
- E5 - PH2 - 14 Physics -2 (10)
- E5 - EWP - 20 Engineering Workshop Practice (10)
- E5 - END - 20 Engineering Drawing (10)
- E5 - PL2 - 14 Physics -2 Laboratory (10)
- E5 - EM1 - 14 Engineering Mathematics-1 (20)
- D5 - CSS - 14 Communication & Study Skills (20)
- C6 - IPC - 11 Introduction to Programming using C++ (20)
- E5 - EM2 - 14 Engineering Mathematics-2 (20)
- E5 - EM3 - 14 Engineering Mathematics 3 (20)
- C7 - JAV - 11 Programming Using Java (20)
- E6 - IEN - 20 Introduction to Engineering (10)
- C5 - CSA - 11Computer System Architecture (20)
- E6 - EEE - 20 Basics of Electrical and Electronic Engineering (10)

- E7 - DIE - 14 Digital Electronics (10)
- C5 - OSH - 11 Operating Systems and Hardware (20)
- E6 - DCN - 14 Data Communication Networks (20)
- E7 - DID - 14 Design and Implementation of Digital Systems (20)
- E7 - EMA - 20 Engineering Management (10)
- C7 - DSA - 11 Data Structures and Algorithms (20)
- E7 - COM - 14 Compilers (20)
- E7 - MAM - 14 Microprocessors and Microcontrollers (20)
- E7 - DEL - 14 Digital Electronics Lab (10)
- E7 - PPR - 13 Professional Practice (60)
- E8 - DSP - 14 Digital Signal Processing (20)
- E7 - LCS - 14 Linear Control Systems (20)
- E7 - CMS - 20 Computer Security (20)
- E8 - RES - 20 Real-Time Embedded Systems (10)
- E8 - RPO - 20 Research Project (30)
- E5 - SAP - 14 Statistics & Probability (20)

Elective modules
- C7 - SEN - 11 Software Engineering (20)
- E7 - WIT - 14 Wireless Technologies (20)
- E7 - DCD - 14 Developing Concurrent and Distributed Systems (20)
- E8 - HCI - 14 Human Computer Interaction (20)
- E8 - BIO - 14 Bio-Informatics (20)
- E8 - DDM - 14 Databases & Data Modeling (20)
- B8-ENT-13: Essentials of Entreprenuership (20)
- ES - ISD - 18: Innovation for Sustainable Development (20)

Recommended full-time study path (5½ years):

Year 1 - Sem 1
C5 - MAT - 11, E5 - PH1 - 14, E5 - PL1 - 14, E5 - GCH - 14, E5 - GCL - 14
Sem 2
C5 - ICO - 14, E5 - PH2 - 14, E5 - PL2 - 14, E5 - EM1 - 14
Year 2 Sem 3
D5 - CSS - 14, E6 - IEN- 20,, E5 - END - 20 E5 - EM2 - 14
Sem 4
C6 - IPC - 11, E6 - EEE - 20, E5 - EWP - 20, E5 - EM3 -14
Year 3 - Sem 5
C5 - CSA - 11, E5 - SAP - 14, C7 - JAV - 11
Sem 6
E7 - DIE - 14, E7 - DEL - 14, C5 - OSH - 11, E6 - DCN - 14
Year 4 - Sem 7
E7 - DID - 14, E7 - EMA - 20, C7 - DSA - 11, E7 CMS-20
Sem 8
E7 - COM - 14, E7 - MAM - 14

Elective – I
(Select one module from below)
C7 - SEN - 11, E7 - WIT - 14, E7-DCD-14
Year 5 - Sem 9
E7 - PPR - 13
Sem 10
E8 - DSP - 14, E7 - LCS - 14 elective (E8 - DDM - 14, E8 - BIO - 14, E8 - HCI - 14)

Year 6 - Sem 11
E8 - RES - 14, E8 - RPO - 20, elective (B8 - ENT - 13, E8 - ISD - 18)

Admissions Criteria

1) Applicants are expected to have successfully completed secondary schooling. The typical l 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, Mathematics and Physics/Double Sciences/Physics+Chemistry.

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

4) For enquiries and more information please visit our General Admissions Information page.

Program Version Course List

14-07-2022

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
				Weeks:286.00			
CEN-8BH-20	**Bachelor of Engineering (Honours) in Computer Engineering**			**Credits: 660.00**			

Core

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
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
D1-FYE-16	BGP workshops	0.00					
D5-CSS-14	Communication and Study Skills	20.00					
E5-END-20	Engineering Drawing	10.00					
E5-EWP-20	Engineering Workshop Practice	10.00					
E5-GCH-14	General Chemistry	10.00					
E5-GCL-14	General Chemistry Laboratory	10.00					
E5-PH1-14	Physics 1	10.00					
E5-PL1-14	Physics 1 Laboratory	10.00					
E6-DCN-14	Data Communication Networks	20.00					
E6-EEE-20	Basics of Electrical and Electronic Engineering	10.00					
E6-IEN-20	Introduction to Engineering	10.00					
E6-SAP-14	Statistics and Probability	20.00					
E7-CMS-20	Computer Security	10.00					
E7-EMA-20	Engineering Management	10.00					
E7-MAM-14	Microprocessors and Microcontroller	20.00					
E7-PPR-13	Professional Practice	60.00					
E8-DSP-14	Digital Signal Processing	20.00					
E8-RPO-20	Research Project	30.00					

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
C6-IPC-11	Introduction to Programming Using C++	20.00		C5-MAT-11 - Mathematics -I			TURC++ - Turbo C++, MSOF10 - Microsoft Office 2010
E5-EM1-14	Engineering Mathematics 1	20.00		C5-MAT-11 - Mathematics -I			
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)
E7-COM-14	Compilers	20.00		C7-JAV-11 - Programming Using JAVA			
E5-EM2-14	Engineering Mathematics 2	20.00		E5-EM1-14 - Engineering Mathematics 1			
E5-EM3-14	Engineering Mathematics 3	20.00		E5-EM2-14 - Engineering Mathematics 2			
E7-LCS-14	Linear Control Systems	20.00		E5-EM3-14 - Engineering Mathematics 3			
E5-PH2-14	Physics 2	10.00		E5-PH1-14 - Physics 1			
E5-PL2-14	Physics 2 Laboratory	10.00		E5-PL1-14 - Physics 1 Laboratory			
E7-DIE-14	Digital Electronics	10.00		E6-ECI-14 - Electronic CircuitsE6-EEE-14 - Basics of Electrical and Electronic EngineeringE6-EEE-20 - Basics of Electrical and Electronic Engineering	E7-DEL-14 - Digital Electronics Laboratory		
E7-DEL-14	Digital Electronics Laboratory	10.00		E6-ECL-14 - Electronic Circuits LabE6-EEE-14 - Basics of Electrical and Electronic Engineering	E7-DIE-14 - Digital Electronics		
E7-DID-14	Design and Implementation of Digital Systems	20.00		E7-DIE-14 - Digital Electronics			

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
E8-RES-14	Real-Time Embedded Systems	10.00		E7-MAM-14 - Microprocessors and Microcontroller			
36		**600.00**					

Elective

Course Code	Course Description	Credits	Elective List	Pre-Requisite List	Co-Requisite List	PreElect	ResourceList
ELEC	Semester 10 Electives	20.00	E8-HCI-14 - Human Computer Interaction, E8-BIO-14 - Bio-Informatics, E8-DDM-14 - Database & Data Modelling				
ELEC	Semester 11 electives	20.00	B8-ENT-13 - Essentials of Entrepreneurship, E8-ISD-18 - Innovation for Sustainable Development				
ELEC	Semester 8 Electives	20.00	C7-SEN-11 - Software Engineering, E7-WIT-14 - Wireless Technologies, E7-DCD-14 - Developing Concurrent and Distributed Systems				
3		**60.00**					
39		**660.00**					