Bachelor of Science in Data Science

Programme details:

The programme consists of core (required) and elective modules as indicated below. Some modules may have pre-requisites (i.e., may require students to pass another module or set of modules first). Some modules may be co-requisite (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 an average of 100 hours of learning from the student.

Core modules:

- E5-PHY-22: Physics (12)
- E5-PCA-22: Pre-Calculus (24)
- C6-CSA-22: Computer Architecture (12)
- D5-WCO-22: Writing and Communication (12)
- C5-PS1-22: Programming Skill 1(6)
- B5-BEN-22: Business and Entrepreneurship (30)
- C6-OPS-22: Operating Systems (12)
- E6-CAL-22: Calculus (12)
- C6-PS2-22: Programming Skill 2 (12)
- C6-COM-22: Computer Networks (12)
- C7-DBS-22: Databases (12)
- E6-DMC-22: Discrete Mathematics for Computer Science (12)
- C6-DSA-22: Data Structures and Algorithms (12)
- C7-DMI-22: Data Mining (12)
- C7-REM-22: Research Methodology (12)
- E7-PAS-22: Probability and Statistics (12)
- C7-PS3-22: Programming Skill 3 (12)
- C7-DVI-22: Data Visualization (12)
- C7-PMA-22: Project Management (12)
- E7-LAL-22: Linear Algebra (12)
- C7-MLE-22: Machine Learning (24)
- C7-ARI-22: Artificial Intelligence (12)
- C7-DAN-22: Data Analytics (12)
- C7-PPR-22: Industrial Attachment (60)
- E7-MUS-22: Multivariate Statistics (12)
- C7-IPD-22: Individual Project in Data Science (24)
- C7-PIE-22: Professional Issues and Ethics (12)

Elective Modules:

- D5-BIO-22: Biology 1 (12)
- E5-CHE-22: Chemistry 1 (12)
- C6-CLC-22: Cloud Computing (9)
- C6-EM1-22: Emerging Technologies 1 (9)
- C6-CRG-20: Cryptography (9)
- C6-MOS-22: Mobile Operating Systems (9)
- C6-CRG-20: Cryptography (9)
- C6-MOS-22: Mobile Operating Systems (9)
- C6-ACN-22: Advanced Computer Networks (9)
- C6-OPT-22: Optimization (9)
- D7-CBI-22: Computational Biology (9)
- B7-CFI-22: Computational Finance (9)
- E7-COS-22: Computational Statistics (9)
- C7-EM2-22: Emerging Technologies (9)
- C7-NLP-22: Nature Language Processing (9)
- C7-BDD-22: Big Data Databases(9)
- C7-AAN-22: Algorithm Analysis (9)
- C7-BDT-22: Big Data Technologies(9)
- C7-AAI-22: Advanced Artificial Intelligence (9)

Recommended full-time study path (4 years):

Semester 1

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

Semester 2

- C6-PAS-24, D6-AWS-20, C6-CE2-20, C6-DMA-19

Semester 3

- C5-FDS-24, C6-CA1-24, C6-LAL-24, C6-SDS-24, C7-SOE-24

Semester 4

- C7-BDT-24, C7-LMD-24, C6-PDS-24, C7-PRA-24, C7-CAL2-24

Semester 5

- C7-DAR-24, C7-PDD-24, C7-CCS-24, C7-SRD-24, C7-AIN-24

Semester 6
- C7-RMS-20, C7-BIB-24, C7-BDM-24, C7-MLE-24

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Semester 7
- C7-APD-24, C7-RP1-20, C7-EAD-24

Semester 8
- C7-PPC-20, C8-RP2-20

Admissions Criteria

1) LGCSE/equivalent with a minimum of 6 subjects of which 4 Credits , 2 Pass including minimum Credit in Mathematics and Pass in English (for sponsorship by NMDS).

2) LGCSE/equivalent with a minimum of 5 subjects of which 3 Credits , 2 Pass including minimum Pass in Mathematics and English (CHE accredited - for non NMDS/self sponsorship).

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

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