

Bachelor of Science (Honours) in Innovative Design and Artificial Intelligence

Programme Structure for 2027-28 Intake (4-year curriculum)

The following description specifies the programme curriculum for students who pursue the programme on a **full-time four-year basis**. Flexibility is allowed for completing the programme within a longer or shorter period in accordance with the stipulations in the Regulations Governing Undergraduate Studies.

		Number of Credits			Total
		1 st	1 st /2 nd	2 nd	
		Term	Term	Term	
FIRST YEAR					
CDS1001	Introduction to Programming for Data Science (R)	3			3
CDS1002	Calculus (R)		3		3
CDS1003	Probability and Statistics 1 (R)		3		3
CDS1004	Mathematical Fundamentals for Data Science (R)		3		3
CDS1101	Innovative Design Fundamentals (R)		3		3
CCC8011	Critical Thinking: Analysis and Argumentation (R)*		3		3
CCC8012	The Making of Hong Kong (R)*		3		3
CCC8015	Generative Artificial Intelligence (R)*		3		3
LUE1001	University English I (R) [#]	3			3
LUE1002	University English II (R) [#]		3		3
	1 ELE Elective ^{##} or Free Elective [@] for Group B students		3		3
					30
SECOND YEAR					
CDS2003	Data Structures and Object-oriented Programming (R)		3		3
CDS2005	Operating Systems for Data Science (R)		3		3
CDS2101	C++ Programming (R)		3		3
CDS2102	Networking (R)		3		3
CDS2103	Machine Learning for Innovative Design (R)		3		3
CCC8013	The Process of Science (R)*		3		3
CCC8014	China in World History (R)*		3		3
LCC1010	Chinese Communication I (R)	3			3
LCC2010	Chinese Communication II (R)			3	3
					27

(R) denotes required course(s).

* Students are assigned to take CCC8011, CCC8012 and CCC8015 in the first year, and CCC8013 and CCC8014 in the second year.

Under the revamped English Language Enhancement (ELE) programme, students will be grouped under two streams. Group A students are those who obtained level 3 in HKDSE English or equivalent while Group B students are those who obtained level 4 or above in HKDSE English or equivalent. Students are encouraged to take their first required ELE course, viz. LUE1001 for Group A and LUE1002 for Group B, in First Term of Year 1. However, they are given the flexibility to take the respective courses in Second Term of Year 1. For Group A students who take LUE1001 in Second Term of Year 1, they should take LUE1002 in First Term of Year 2. For details, please refer to <https://www.ln.edu.hk/reg/undergraduate-programmes/english-language-enhancement-ele-curriculum>.

Group A students have to take 1 ELE elective while Group B students have to take 2 ELE electives. ELE electives could be taken from the term in which LUE1002 is taken. For more details, please click <https://www.ln.edu.hk/reg/undergraduate-programmes/english-language-enhancement-ele-curriculum>.

@ Students are required to take 6 credits of free electives.

		Number of Credits			Total
		1 st Term	1 st /2 nd Term	2 nd Term	
SECOND TO FOURTH YEARS					
	1-2 ELE Elective(s) ^{##}		3-6		3-6
	4 Cluster Courses [^]		12		12
	3 Major Elective Courses		9		9
	1-2 Free Elective(s) [@]		3-6		3-6
LUE4002	Professional Communication in English for Business (R)		3		3
					33
THIRD YEAR					
CDS3001	Databases and Data Warehouses (R)	3			3
CDS3101	Intelligent Sensing and Control (R)		3		3
CDS3102	Image Processing (R)		3		3
CDS3103	GPU and Parallel Computing (R)			3	3
CDS3104	Visualization (R)			3	3
CDS3105	Human Computer Interaction (R)			3	3
					18
FOURTH YEAR					
CDS4101	Blockchain Technology (R)		3		3
CDS4102	Systems Integration, Verification, and Validation (R)		3		3
CDS4105	Capstone 1 - Innovation, Technology and Design (R)	3			3
CDS4106	Capstone 2 - Design Challenge (R)			3	3
					12
Minimum credits for Honours Degree:					120

(R) denotes required course(s).

^{##} Group A students have to take 1 ELE elective while Group B students have to take 2 ELE electives. ELE electives could be taken from the term in which LUE1002 is taken. For more details, please click <https://www.ln.edu.hk/reg/undergraduate-programmes/english-language-enhancement-ele-curriculum>.

[^] Students are required to complete 4 Cluster courses in total. For details, please see the Core Curriculum Section.

[@] Students are required to take 6 credits of free electives.

REQUIREMENTS IN INNOVATIVE DESIGN AND ARTIFICIAL INTELLIGENCE

Required Courses (Total 20 courses, 60 credits)

Foundation Courses (Total 4 courses, 12 credits)

CDS1001 Introduction to Programming for Data Science

CDS1002 Calculus

CDS1003 Probability and Statistics 1

CDS1004 Mathematical Fundamentals for Data Science

Functional Courses (Total 3 courses, 9 credits)

CDS2003 Data Structures and Object-oriented Programming

CDS2005 Operating Systems for Data Science

CDS3001 Databases and Data Warehouses

DIDS Department Courses (Total 11 courses, 33 credits)

CDS1101 Innovative Design Fundamentals

CDS2101 C++ Programming

CDS2102 Networking

CDS2103 Machine Learning for Innovative Design

CDS3101 Intelligent Sensing and Control

CDS3102 Image Processing

CDS3103 GPU and Parallel Computing

CDS3104 Visualization

CDS3105 Human Computer Interaction

CDS4101 Blockchain Technology

CDS4102 Systems Integration, Verification, and Validation

Capstone Courses (Total 2 courses, 6 credits)

CDS4105 Capstone 1 - Innovation, Technology and Design

CDS4106 Capstone 2 - Design Challenge

Major Elective Courses (Any 3 courses, 9 credits)

CDS2104 Internet of Things

CDS3106 Cloud Computing

CDS3107 3D Modelling and Animation

CDS3108 Algorithms

CDS4006 Deep Learning

CDS4008 Optimization

CDS4103 Web 3D Technology

CDS4104 Embedded Systems

Free Electives (Total 2 courses, 6 credits)

Students may select courses in any discipline to obtain the total number of credits required for graduation, subject to timetable, course load and study scheme constraints.