Hong Kong Baptist University

Department of Computer Science

BSc (Hons) in Computing and Information Systems (4YC)

Programme Schedule

Year 1

Course Code	Course Title	Unit(s)
Semester 1		
GCLA1008	General Education Core - English I	3
BIOL1005/ CHEM1005/ PHYS1005	Introduction to Biology/ Chemistry/ Physics and Energy Science	9
Or	Or	Or
MATH1005/ COMP1005/ SCIE1005	Calculus/ Essence of Computing/ Integrated Science Laboratory	7
	General Education Core - Information Management Technology	3
	General Education Core - PE	1
ULIF1008	General Education Core - U Life	0
Semester 2		
GCLA1009	General Education Core - English II	3
MATH1005/ COMP1005/ SCIE1005	Calculus/ Essence of Computing/ Integrated Science Laboratory	7
Or	Or	Or
BIOL1005/ CHEM1005/ PHYS1005	Introduction to Biology/ Chemistry/ Physics	9
	General Education Core – Numeracy	3
	General Education Core - PE	1
ULIF1009	General Education Core - U Life	0
GCLA1005	General Education Core - University Chinese	3
Total Units		**33**

Year 2

Course Code	Course Title	Unit(s)
Semester 1		
COMP1006	Facets of Computing	1
COMP2006	Computer Organization	3
COMP2007	Object Oriented Programming	3
	General Education Core - History and Civilization	3
MATH1205	Discrete Math	3
	General Education Elective 1 (distribution requirement)	3
Semester 2		
COMP2015	Data Structures and Algorithms	3
COMP2017	Operating Systems	3
	General Education Core - Public Speaking	3
COMP2016	Database Management	3
MATH2005	Probability and Statistics for Computer Science	3
	Free Elective 1	3
Total Units		**34**

Year 3

Course Code	Course Title	Unit(s)
Semester 1		
COMP2008	Applied IS Laboratory I	1
COMP3007	Systems Analysis & Design	3
COMP3008	IS Development Project I	1
COMP2005	Business in IT Context	3
	General Education Elective 2 (distribution requirement)	3
	General Education Elective 3 (distribution requirement)	3
	Free Elective 2	3
Semester 2		
COMP2009	Applied IS Laboratory II	1
COMP3009	IS Development Project II	1
	General Education Core - Values and Meaning of Life	3
COMP3015	Data Communications and Networking	3
	General Education Elective 4 (distribution requirement)	3
	Free Elective 3	3

Summer		
COMP3016	Internship	1
Total Units		**32**

Year 4

Course Code	Course Title	Unit(s)
Semester 1		
COMP4888	Final Year Project I	3
COMP4005	Information Systems Theory, Methodology and Architecture	3
COMP4095	Information Systems Management and Professional Practices	3
	Major Elective 1	3
	Free Elective 4	3
Semester 2		
COMP4889	Final Year Project II	3
	Major Elective 2	3
	Free Elective 5	3
	Free Elective 6	3
	Free Elective 7	3
Total Units		**30**

Total Number of Units (minimum) for Graduation: **129^**

^At least 36 units must be at the upper level (Levels 3 and 4).

Major Elective Courses (All are of upper division)

Course Code	Course Title
COMP3005	Design and Analysis of Algorithms
COMP3026	Digital Media Computing
COMP3027	Enterprise Information Systems
COMP3035	Health Information Technology
COMP3045	Advanced Algorithm Design, Analysis, and Implementation
COMP3046	Advanced Programming for Software Development
COMP4007	Software Design, Development and Testing
COMP4015	Artificial Intelligence and Machine Learning
COMP4016	Clinical Decision Support and Information Systems
COMP4017	Computer and Network Security
COMP4025	Interactive Computer Graphics

COMP4026	Computer Vision and Pattern Recognition
COMP4027	Data Mining and Knowledge Discovery
COMP4035	Database System Implementation
COMP4036	Digital Media Computing and Communications
COMP4037	E-Technology Architectures, Tools and Applications
COMP4045	Human Computer Interaction
COMP4046	Information Systems Control and Auditing
COMP4047	Internet and World Wide Web
COMP4055	Medical Image Processing and Applications
COMP4056	Nature-Inspired Computing
COMP4057	Distributed and Cloud Computing
COMP4065	Performance Modelling and Analysis of Computer Systems
COMP4066	Principles of Programming Language
COMP4067	Theory of Computation
COMP4075	Social Computing and Web Intelligence
COMP4076	Selected Topics in Digital Media and Mobile Technology
COMP4077	Selected Topics in Enterprise Systems and Business Intelligence
COMP4085	Selected Topics in Intelligent Informatics
COMP4086	Selected Topics in Theoretical Computer Science
COMP4087	Selected Topics in Web Technology and Data Engineering
COMP4096	Business Intelligence and Decision Support
COMP4097	Mobile Computing
COMP4105	Web Search Principles and Technology
COMP4106	E-Business Technology
COMP4115	Exploratory Data Analysis and Visualization
COMP4125	Visual Analytics
COMP4126	Health Informatics: Technology and Practices

*Note that students are encouraged to take more than just 6 units requirement on major electives using their free elective units to develop different areas of specialization for their specific preference on future development. The following provides some suggested streams of specialization as reference for students.

While stream specialization is not a graduation requirement for CIS Programme, students are encouraged to consider selecting major electives using their major electives units as well as the free electives units in the following streams according to their interest:

Enterprise Systems and Business Intelligence

Course Code	Course Title
COMP3027	Enterprise Information Systems

COMP4035	Database System Implementation
COMP4037	E-Technology Architectures, Tools and Applications
COMP4046	Information Systems Control and Auditing
COMP4057	Distributed and Cloud Computing
COMP4077	Selected Topics in Enterprise Systems and Business Intelligence
COMP4096	Business Intelligence and Decision Support
COMP4106	E-Business Technology

Digital Media and Mobile Technology

Course Code	Course Title
COMP3026	Digital Media Computing
COMP4025	Interactive Computer Graphics
COMP4036	Digital Media Computing and Communications
COMP4076	Selected Topics in Digital Media and Mobile Technology
COMP4097	Mobile Computing

Web Technology and Data Engineering

Course Code	Course Title
COMP4017	Computer and Network Security
COMP4035	Database System Implementation
COMP4037	E-Technology Architectures, Tools and Applications
COMP4047	Internet and World Wide Web
COMP4057	Distributed and Cloud Computing
COMP4087	Selected Topics in Web Technology and Data Engineering
COMP4105	Web Search Principles and Technology

Intelligent Informatics

Course Code	Course Title
COMP4015	Artificial Intelligence and Machine Learning
COMP4026	Computer Vision and Pattern Recognition
COMP4027	Data Mining and Knowledge Discovery
COMP4045	Human-Computer Interaction
COMP4056	Nature Inspired Computing
COMP4075	Social Computing and Web Intelligence
COMP4085	Selected Topics in Intelligent Informatics

Health Information Technology

Course Code	Course Title
COMP3035	Health Information Technology
COMP4016	Clinical Decision Support and Information Systems
COMP4027	Data Mining and Knowledge Discovery
COMP4055	Medical Image Processing and Applications
COMP4126	Health Informatics: Technology and Practices

Computer Science Theory

Course Code	Course Title
COMP3005	Design and Analysis of Algorithms (elective for CIS)
COMP3045	Advanced Algorithm Design, Analysis, and Implementation
COMP4065	Performance Modelling and Analysis of Computer Systems
COMP4066	Principles of Programming Language
COMP4067	Theory of Computation
COMP4086	Selected Topics in Theoretical Computer Science