

Catalogue Term 2014-15
BSC4 Cohort 2013, BSC3 & BSC2 Cohort 2014
Course List with Prerequisite(s) and Precursor(s)

Degree Requirement

1. Gateway Education (Please refer to http://www.cityu.edu.hk/edge/ge/ge_requirements.htm.)

	Normative 4-year Degree (Cohort 2013)	Advanced Standing I (Cohort 2014)	Advanced Standing II (Senior-year Entry) (Cohort 2014)
English (GE1401 & GE2410)	6 credit units	6 credit units	3 credit units (GE2410)
Chinese Civilisation – History and Philosophy (GE1501)	3 credit units	3 credit units	Not compulsory requirement
Distributional requirements: Area 1: Arts and Humanities Area 2: Study of Societies, Social and Business Organisations Area 3: Science and Technology	21 credit units (A minimum of 3 credit units from each of the three areas)	6 credit units	3 credit units
College / School-specified Courses	N/A	6 credit units [^]	6 credit units [^]

[^]College-specified courses for Advanced Standing I and II

Course Code	Course Name	Unit	Prerequisite(s)	Precursor(s)
GE2326	Probability in Action: From the Unfinished Game to the Modern World	3	Nil	Nil
Choose any ONE from the following list:				
GE2313	Global IT Case Studies	3	Nil	Nil
GE2315	Security and Privacy in the Information Age	3	Nil	Nil
GE2323	Mobile Social Networks: Practices, Challenges, and Beyond	3	Nil	Nil
GE2324	The Art and Science of Data	3	Nil	Nil
CB2100	Introduction to Financial Accounting	3	Nil	Nil
CB2300	Management	3	Nil	Nil
CB2500	Information Management	3	Nil	Nil
CB2601	Marketing	3	Nil	Nil

2. Chinese Language Requirement

From 2012 cohort onwards, students are required to satisfy the Chinese Language Requirement as follows:

(i)	Students with an HKDSE score below 4 in Chinese, or an HKALE AS Chinese Language and Culture score below D	CHIN1001 University Chinese I*
(ii)	Students with an HKDSE score of 4 or above in Chinese or an HKALE AS Chinese Language and Culture score D or above, or those who have successfully completed the 3-credit unit Chinese course	No requirement
(iii)	Students whose qualifications do not fall within (i) and (ii) above	No requirement

*The 3 credit units of *the Chinese course* will NOT be counted towards the minimum credit units required for graduation and will NOT be included in the calculation of CGPA.

3. College/School Requirement, if any

Students of the College of Science and Engineering are required to earn 15 CU in fulfilment of the College requirements.

Course Code	Course Name	Unit	Prerequisite(s)	Precursor(s)
Normative 4-year Degree				
Mathematics (6 credit units)				
MA1200 /	Calculus and Basic Linear Algebra I /	3	(i) HKDSE Maths Compulsory Part, or (ii) HKDSE Maths Compulsory Part and Extended Part Module 1, or (iii) HKDSE Maths Compulsory Part and Extended Part Module 2 (Levels 1 – 3); or equivalent <i>(Students with HKDSE Maths Extended Part Module 2 (Levels 4 – 5) are required to take MA1300 instead.)</i>	Nil
MA1300	Enhanced Calculus and Linear Algebra I	3	(i) HKDSE Maths Compulsory Part and Extended Part Module 1 (Level 5), or (ii) HKDSE Maths Compulsory Part and Extended Part Module 2 (Levels 3 – 5); or equivalent	Nil
MA1201 /	Calculus and Basic Linear Algebra II /	3	(i) MA1200 Calculus and Basic Linear Algebra I, or (ii) Grade B or above in MA1100 Foundation Maths I (approval from MA must be obtained), or (iii) MA1300 Enhanced Calculus and Linear Algebra I (approval from MA must be obtained)	Nil
MA1301	Enhanced Calculus and Linear Algebra II	3	(i) MA1300 Enhanced Calculus and Linear Algebra I, or (ii) Grade B or above in MA1200 Calculus and Basic Linear Algebra I (approval from MA must be obtained)	Nil
Computing (3 credit units)				
CS1102 /	Introduction to Computer Studies /	3	Nil	Nil
CS1302	Introduction to Computer Programming	3	Level 2 or above in HKDSE Information & Communication Technology with Software Development elective <u>or</u> Pass in a placement test administered by CS Department	Nil
Science (6 credit units)				
<i>Choose two from the following three subject areas:</i>				
<i>Physics</i>				
AP1201	General Physics I	3	HKDSE Mathematics Compulsory Part or equivalent	HKDSE Physics <u>or</u> Combined Science (Physics, Chemistry) <u>or</u> Combined Science (Biology, Physics) or AP1200 Foundation Physics
<i>Chemistry</i>				
BCH1100	Chemistry	3	Nil	Nil
<i>Biology</i>				
BCH1200	Discovery in Biology	3	Nil	Nil

Advanced Standing I (Note 1)			
College Requirement waived.	15	-	-
Advanced Standing II (Senior-year Entry) (Note 2)			
College Requirement waived.	15	-	-

Major Requirement (74 credit units)

1. Core Courses (59 credit units)

16 credit units are waived for students admitted into Advanced Standing II including courses CS2115, CS2204, CS2310, CS2611, CS3201, AIS3301

Required CS Courses (53 credit units)

Course Code	Course Name	Unit	Prerequisite(s)	Precursor(s)
CS2115	Computer Organization	3	Nil	Nil
CS2204	Fundamentals of Internet Applications Development	3	Nil	Nil
CS2310	Computer Programming	3	CS1102 /CS1302	Nil
CS2312	Problem Solving and Programming	3	Nil	CS2310 / CS2311
CS2611	Seminars on Contemporary Technology I	1	Nil	Nil
CS3103	Operating Systems	3	Nil	(CS2115 /EE2004) AND (CS2310/CS2311)
CS3201	Computer Networks	3	Nil	Nil
CS3334	Data Structures	3	CS2310/CS2311 /CS2312	Nil
CS3342	Software Design	3	CS2310/ CS2311 / CS2360	Nil
CS3343	Software Engineering Practice	3	CS2310/CS2311 /CS2312 /CS2360	(CS3342 and CS3402)
CS3402	Database Systems	3	CS2310/ CS2311 /CS2313 /CS2360	Nil
CS3503	IT Professional Placement	9	Completed at least 25 cus of CS courses and attained CGPA of 1.7 or above in semester prior to placement	Nil
CS3612	Seminars on Contemporary Technology II	1	Nil	Nil
CS4335	Design and Analysis of Algorithms	3	Nil	CS2468 /CS3334 /EE2331
CS4514	Project	9	CS3502 /CS3503 /Approval from Programme Leader if CS3502 /CS3503 have not been completed.	Nil

Required Supporting Courses (6 credit units)

SS3904	Science, Technology and Society for Computing	3	Nil	Nil
MA2185	Discrete Mathematics	3	Nil	Nil

2. Electives: (15 credit units)

Information Security Stream – Stream Core:				
Course Code	Course Name	Unit	Prerequisite(s)	Precursor(s)
CS4286	Internet Security and E-Commerce Protocols	3	CS3201 /CS3270	MA2144 / MA2177 / MA2185 /MA2504
CS4293	Topics on Computer Security	3	(CS2310 /CS2311 /CS2331) & (CS3103) & (CS3201)	CS4286
CS4394	Information Security and Management	3	Nil	CS3102 /CS3103 /CS3161
Multimedia Computing Stream – Stream Core:				
CS3483	Multimodal Interface Design	3	CS2310 /CS2311 /CS2313 /CS2360	Nil
CS4182	Computer Graphics	3	CS2303 /CS3334 /EE3206	Nil
CS4185	Multimedia Technologies and Applications	3	(CS2310 /CS2311 /CS2313 /CS2331) and (CS2303 / CS3334)	Nil
Software Engineering and Project Management Stream - Stream Core:				
CS3346	Software Testing and Maintenance	3	CS3342	Nil
CS3356	Managing Software Projects	3	CS3342 /CS3354	Nil
CS4348	Software Quality Management	3	CS3342	Nil
Data Science Stream – Stream Core:				
CS3481	Fundamentals of Data Science	3	CS2204	Nil
CS4480	Data-Intensive Computing	3	CS3402	
CS4487	Machine Learning	3	CS3481 /CS4483	Nil
Other Electives:				
CS3183	Performance Evaluation	3	CS3102 /CS3103 /CS3161	MA2144 /MA2185 /MA2172
CS3184	Chinese Computing	3	CS2302 /CS2303/ CS2468 /CS3334	(CS3103 /CS3161) & (CS3201 /CS3270)
CS3185	Computer Architecture	3	CS2115	Nil
CS3282	E-Commerce Technology	3	CS2204 /CS3201 /CS3270	Nil
CS3283	Distributed Systems	3	Nil	CS3103 & CS3201
CS3371	E-Logistics Application System	3	CS2360 and CS3282 and CS3354	Nil
CS3372	Enterprise Systems Development	3	CS2310 /CS2311 /CS2360	CS3282 /CS3283 /CS4286
CS3382	Web Usability Design and Engineering	3	Nil	CS2204 /CS2310 /CS2311 /CS2312 /CS2313 /CS2331 /CS2332 /CS3270
CS3391	Advanced Programming	3	CS2310 /CS2311	Nil
CS4183	Advanced Operating Systems	3	CS3103	Nil
CS4186	Computer Vision & Image Processing	3	CS2303 or CS3334 or CS4335 or EE2331 or EE3131	Nil
CS4187	Computer Vision for Interactivity	3	CS2303 / CS3334	Nil
CS4280	Advanced Internet Applications Development	3	CS2204 or (CS1103 & CS1303 & CS2313)	CS2303 /CS3201 /CS3270
CS4284	Mobile Computing	3	CS3201 or CS3270 or EE3009 or EE3016	Nil

Course Code	Course Name	Unit	Prerequisite(s)	Precursor(s)
CS4285	High Speed Multimedia Networks	3	CS3201 /EE3009 or (EE3015 and EE2371)	Nil
CS4288	Cryptographic Algorithms and Protocols	3	MA2185	Nil
CS4289	Pervasive Computing	3	CS3201 and CS3103	Nil
CS4290	Digital Media and Rights Management	3	(CS3270 & CS3278) /CS2204 /CS3276 /CS4281	CS4286
CS4292	Distributed Network Algorithms and Optimization	3	CS3201 / CS3270 /EE3311 /EE3900	Nil
CS4295	Mobile Application Programming	3	(CS2312 /CS2313/ CS2332/CS2360) & (CS1303/CS2204/CS3201 / CS3270)	Nil
CS4296	Cloud Computing	3	CS3201 & CS3103	CS2312/CS2331
CS4297	Cloud Robotics and Automation	3	CS2310 and (CS3103 /CS4480 /CS4487)	Nil
# CS4298	iOS Application Development	3	(CS2312/CS2313/CS2360) and (CS1303 /CS2204 /CS3201/ CS3270)	Nil
CS4367	Computer Games Design	3	Nil	Nil
CS4380	Web 2.0 Technologies	3	(CS2312 /CS2332 /CS2333) & (CS2204)	Nil
CS4381	Advanced Software Design	3	CS3342	MA2185
CS4385	Topics in Software Engineering	3	CS3342 /CS3367	Nil
CS4386	AI Game Programming	3	CS2310 /CS2311 /CS2312 /CS2313	Nil
CS4388	Artificial Intelligence and Art	3	Nil	Nil
CS4392	Topics in Theory of Computing	3	CS3335 /CS3381 /CS4335	Nil
CS4482	Advanced Database Systems	3	CS3402 /CS3462	Nil
CS4485	Information Retrieval	3	CS3402 /CS3462	Nil
CS4486	Intelligent Systems	3	Nil	CS2468 /CS3334
CS4552	Guided Study	3	Completion of at least 60 credit units with an overall GPA of at least 2.0	Nil
EE4940	Digital Information Communications	3	Nil	[CS2113 /CS2115] & CS3201
IS4500	Information Systems Project Management	3	(CS3311 & CS3312) or (CS3342 & CS3343)	Nil
IS4501	Information Systems Audit	3	(CS3311 & CS3312) or (CS3342 & CS3343)	Nil
MA2172	Applied Statistics for Sciences and Engineering	3	Nil	Nil

Subject to approval.

Note 1: For students with recognised Advanced Level Examinations or equivalent qualifications.

Note 2: For Associate Degree/Higher Diploma graduates admitted to the senior year.