THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering

Suggested Study Plan for Broad-based Entrants Admitted to CUHK in 2020

University Core Requirements

English	9	
Chinese	6	
Foundation GE	6	
University GE	9	
College GE	6	
PE	2	
IT	1	(exempted for course but not unit)
	39	

Major Requirements

Faculty Package	9	
Foundation Courses	11	
Major Required	29	
Major Electives	20	
Major FYP	6	
	75	

Free Electives	**9**	

123 (Minimum unit requirement for graduation)

	Recommended Course Pattern	Units
First Year of Attendance	**1ˢᵗ term** Faculty Package: ENGG1110/ESTR1002	3
	Language: CHLT1100	3
	Major Required: MATH1510	3
	Physical Education: 1 course	1
	College General Education: 1 course	3
	Term total	**13**
	2ⁿᵈ term Faculty Package: ENGG1120/ESTR1005, ENGG1130/ESTR1006	6
	Language: ELTU1001	4
	Major Required: Any one from AIST1110, CHEM1280, 1380, CSCI1120/ESTR1100, CSCI1130/ESTR1102, ELEG2700, ENGG1310/ESTR1003, ENGG2720/ESTR2014, ENGG2740/ESTR2016, ENGG2780/ESTR2020, FTEC2101/ESTR2520, LSCI1001, 1003, MAEG1020, PHYS1003, 1110, SEEM2440/ESTR2500, SEEM2460/ESTR2540	2-3
	Physical Education: 1 course	1
	General Education: UGFH/UGFN (1 course)	3
	Term total	**16-17**

Second Year of Attendance	**1ˢᵗ term** Language: CHLT1200		3
	Major Required:		
	ENGG2440/ESTR2004		3
	IERG1810		1
	IERG2051/ESTR2302		3
	IERG2060/ESTR2304		3
	IERG2080/ESTR2306		3
	General Education: UGFH/UGFN (1 course) †		3
		Term total	**19**
	2ⁿᵈ term Language: ELTU2014		3
	Major Required:		
	CSCI2100/ESTR2102		3
	IERG2310/ESTR2300		3
	IERG2470/ESTR2308		3
	IERG2602		1
	IERG3820		1
	General Education: UGE (1 course)		3
		Term total	**17**
Third Year of Attendance	**1ˢᵗ term** Major Required:		
	IERG3080/ESTR3308		3
	IERG3310/ESTR3310		3
	IERG3800		1
	Major Elective(s): 1 course		2-3
	General Education: UGE (1 course)		3
	Free Elective(s): 1 course		3
		Term total	**15-16**
	2ⁿᵈ term Language: ELTU3014		2
	Major Required:		
	IERG3060		3
	IERG3810		1
	Major Elective(s): 3 courses		9
	General Education: UGE (1 course)		3
		Term total	**18**

† Students may take the Foundation General Education class in Summer Session.

Fourth Year of Attendance	**1st term** Major Required: IERG4998/ESTR4998 Major Elective(s): 2 courses College General Education: 1 course	 3 6 3
		12
	2nd term Major Required: IERG4999/ESTR4999 Major Elective(s): 1 course Free Elective(s): 2 courses	 3 3 6
	Term total	**12**
	Faculty Package + Major Required **University Core Requirement** **Free Electives**	**75** **39** **9**
	Minimum unit requirement for graduation	**123**

Course List

(Note: For quick reference of the courses appeared on the study plan(s).
Please refer to CUSIS for course information)

Course Code	Course Title	Unit(s)
AIST1110	Introduction to Computing using Python	3
CHEM1280	Introduction to Organic Chemistry and Biomolecules	3
CHEM1380	Basic Chemistry for Engineers	3
CHLT1100	University Chinese I	3
CHLT1200	University Chinese II	3
CSCI1120/ESTR1100	Introduction to Computing Using C++	3
CSCI1130/ESTR1102	Introduction to Computing Using Java	3
CSCI2100/ESTR2102	Data Structures	3
CSCI3150/ESTR3102	Introduction to Operating Systems	3
ELEG2700	Introduction to Electronic System Design	3
ELTU1001	Foundation English for University Studies	4
ELTU2014	English for Engineering I	3
ELTU3014	English for Engineering II	2
ENGG1110/ESTR1002	Problem Solving by Programming	3
ENGG1120/ESTR1005	Linear Algebra for Engineers	3
ENGG1130/ESTR1006	Multivariable Calculus for Engineers	3
ENGG1310/ESTR1003	Engineering Physics: Electromagnetics, Optics and Modern Physics	3
ENGG1820	Engineering Internship	1
ENGG2440/ESTR2004	Discrete Mathematics for Engineers	3
ENGG2470/ESTR2012	Probability for Engineers	3
ENGG2720/ESTR2014	Complex Variables for Engineers	2
ENGG2740/ESTR2016	Differential Equations for Engineers	2
ENGG2780/ESTR2020	Statistics for Engineers	2
ENGG5301	Information Theory	3
ENGG5302	Random Processes	3
ENGG5303	Advanced Wireless Communications	3
ENGG5383	Applied Cryptography	3
ENGG5392	Lightwave System Technologies	3
FTEC2101/ESTR2520	Optimization Methods	3
IERG1810	Electronic Circuit Design Laboratory	1
IERG2051/ESTR2302	Signals and Systems	3
IERG2060/ESTR2304	Basic Analog and Digital Circuits	3
IERG2080/ESTR2306	Introduction to Systems Programming	3
IERG2310/ESTR2300	Principles of Communication Systems	3
IERG2470/ESTR2308	Probability Models and Applications	3
IERG2602	Engineering Practicum	1
IERG3010/ESTR3300	Digital Communications	3
IERG3050	Simulation and Statistical Analysis	3
IERG3060	Microcontrollers and Embedded Systems	3
IERG3080/ESTR3308	Information and Software Engineering Practice	3
IERG3280/ESTR3302	Networks: Technology, Economics, and Social Interactions	3
IERG3300/ESTR3304	Introduction to Stochastic Processes	3
IERG3310/ESTR3310	Computer Networks	3
IERG3320/ESTR3306	Social Media and Human Information Interaction	3
IERG3800	Information Infrastructure Design Lab	1
IERG3810	Microcontrollers and Embedded System Laboratory	1
IERG3820	Communications Laboratory	1

Course Code	Course Title	Unit(s)
IERG3830	Product Design and Development	3
IERG4004	E-payment Systems and Cryptocurrency Technologies	3
IERG4030/ESTR4320	Optical Communications	3
IERG4080/ESTR4312	Building Scalable Internet-based Services	3
IERG4090/ESTR4302	Networking Protocols and Systems	3
IERG4100/ESTR4304	Wireless Communication Systems	3
IERG4110/ESTR4314	Hands-on Wireless Communication	3
IERG4130/ESTR4306	Introduction to Cyber Security	3
IERG4150/ESTR4322	Introduction to Cryptography	3
IERG4160	Image and Video Processing	3
IERG4180/ESTR4308	Network Software Design and Programming	3
IERG4190	Multimedia Coding and Processing	3
IERG4210	Web Programming and Security	3
IERG4220	Secure Software Engineering	3
IERG4230	Introduction to Internet of Things	3
IERG4300/ESTR4300	Web-scale Information Analytics	3
IERG4330/ESTR4316	Programming Big Data Systems	3
IERG4340	Emerging Technologies in Information Engineering	3
IERG4350	Cloud Computing Security	3
IERG4831	Networking Laboratory I	2
IERG4841	Networking Laboratory II	2
IERG4998/ESTR4998	Final Year Project I	3
IERG4999/ESTR4999	Final Year Project II	3
IERG5020	Telecommunication Switching and Network Systems	3
IERG5040	Lightwave System Technologies	3
IERG5090	Advanced Networking Protocols and Systems	3
IERG5100	Advanced Wireless Communications	3
IERG5130	Probabilistic Models and Inference Algorithms for Machine Learning	3
IERG5140	Lightwave Networks	3
IERG5154	Information Theory	3
IERG5200	Channel Coding and Modulation	3
IERG5230	Algorithms and Realization of Internet of Things Systems	3
IERG5240	Applied Cryptography	3
IERG5280	Mobile Networking	3
IERG5290	Network Coding Theory	3
IERG5300	Random Processes	3
IERG5310	Security and Privacy in Cyber Systems	3
IERG5320	Digital Forensics	3
IERG5330	Network Economics	3
IERG5340	IT Innovation and Entrepreneurship	3
IERG5350	Reinforcement Learning	3
IERG5590	Advanced Topics in Blockchain	3
LSCI1001	Basic Concepts in Biological Sciences	3
LSCI1003	Life Sciences for Engineers	3
MAEG1020	Computational Design and Fabrication	3
MATH1510	Calculus for Engineers	3
PHYS1003	General Physics for Engineers	3
PHYS1110	Engineering Physics: Mechanics and Thermodynamics	3
SEEM2440/ESTR2500	Engineering Economics	3
SEEM2460/ESTR2540	Introduction to Data Science	3
UGFH1000/ UGFN1000	University General Education Foundation Course	3