

THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering

**Suggested Study Plan for Advanced Standing to FYFD Places
with Various Entrance Qualifications (2018)**

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| a) Recommended for those who have 24 units of exemption | Page 1-2 |
| b) Recommended for those who have 21 units of exemption, including an additional 3-unit General Education Foundation course | Page 3-4 |
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| d) Recommended for those who have 18 units of exemption | Page 7-8 |
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a) Recommended course pattern for those who have 24 units of exemption:

University Core Requirements	Unit Exemption for Students	Units need to be fulfilled
English (9 units)	7 units	2 units
Chinese (6 units)	6 units	0 units
UGE (15 units)	9 units	6 units
CGE (6 units)	No exemption	6 units
IT (1 unit)	1 unit	0 units
PE (2 units)	1 unit	1 unit
39 units	Total: 24 units	Total: 15 units

	Recommended Course Pattern	Units
First Year of Attendance	1st term	
	Faculty Package: ENGG1110/ESTR1002	3
	Major Required: MATH1510*	3
	IERG2080/ESTR2306	2
	PHYS1003/PHYS1110[a]	3
	College General Education: 1 course Physical Education	3 1
	<i>Term total</i>	15
	2nd term	
Faculty Package: ENGG1100/ESTR1000, ENGG1410/ESTR1004, IERG2602	3 3 1	
Major Required: CSCI2100/ESTR2102	3	
Any one from CHEM1380/CSCI1120/1130/ENGG1310/ ESTR1003/1100/1102/LSCI1001/1003/PHYS1110	3	
General Education: UGFH1000 or UGFN1000	3	
	<i>Term total</i>	16

Second Year of Attendance	1st term Major Required: ENGG2420/ESTR2000 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 General Education: UGEA Free Elective(s): 1 course	3 1 3 3 3 3
	<i>Term total</i>	16
	2nd term Major Required: ENGG2310/ESTR2300 ENGG2470/ESTR2012 IERG3820 Major Elective(s): 2 electives Free Elective(s): 1 course	3 3 1 6 3
	<i>Term total</i>	16
Third Year of Attendance	1st term Major Required: IERG3080/ESTR3308 IERG3310/ESTR3310 IERG3800 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	3 3 1 3 5 3
	<i>Term total</i>	18
	2nd term Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 2 electives Language: ELTU3014 Free Elective(s): 1 course	3 1 3 6 2 3
	<i>Term total</i>	18
<i>Breakdown: Faculty Package + Major Required</i>		58
<i>Major Electives</i>		17
<i>University Core Requirement</i>		15
<i>Free Electives</i>		9
<i>(Exempted Units)</i>		(24)
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Explanatory Notes:

- * Non-JUPAS admittees and JUPAS with HKDSE Mathematics Extended Modules I or II are required to attend a Mathematics Placement Test. Students who fail or are absent from the Placement Test will be required to take MATH1020 in the same term when they take MATH1510.
- [a] The compulsory Physics course shall be taken in accordance with students' HKDSE results or placement test results as follows:
- i) Students who have attained Level 4 or above in HKDSE Mathematics (Compulsory Part) AND Level 4 or above in Physics or Level 5 or above in Combined Science with Physics Component shall take ENGG1310/ESTR1003 or PHYS1110.
 - ii) Students with HKDSE results but did not attain the academic levels as stated in (i) shall take PHYS1003.
 - iii) Students without HKDSE results shall sit for the placement test arranged by the Department of Physics. Students who pass the placement test shall take ENGG1310/ESTR1003 or PHYS1110. Students who fail or are absent from the placement test shall take PHYS1003.

b) Recommended for those who have 21 units of exemption, including an additional 3-unit General Education Foundation course:

University Core Requirements	Unit Exemption for Students	Units need to be fulfilled
English (9 units)	4 units	5 units
Chinese (6 units)	6 units	0 units
UGE (15 units)	9 units	6 units
CGE (6 units)	No exemption	6 units
IT (1 unit)	1 unit	0 units
PE (2 units)	1 unit	1 unit
39 units	Total: 21 units	Total: 18 units

	Recommended Course Pattern	Units
First Year of Attendance	1st term Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510* IERG2080/ESTR2306 PHYS1003 /PHYS1110[a] College General Education: 1 course Physical Education	3 3 2 3 3 1
	<i>Term total</i>	15
	2nd term Faculty Package: ENGG1100/ESTR1000, ENGG1410/ESTR1004, IERG2602 Major Required: CSCI2100/ESTR2102 Any one from CHEM1380/CSCI1120/1130/ENGG1310/ ESTR1003/1100/1102/LSCI1001/1003/PHYS1110 General Education: UGFH1000 or UGFN1000	3 3 1 3 3 3
	<i>Term total</i>	16
Second Year of Attendance	1st term Major Required: ENGG2420/ESTR2000 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 IERG3310/ESTR3310 IERG3800 General Education: UGEA	3 1 3 3 3 1 3
	<i>Term total</i>	17
	2nd term Major Required: ENGG2310/ESTR2300 ENGG2470/ESTR2012 IERG3820 Major Elective(s): 2 electives Language: ELTU2014	3 3 1 6 3
	<i>Term total</i>	16
	Summer term Free Elective(s): 1 course	3

	<i>Term total</i>	3
Third Year of Attendance	1st term	
	Major Required:	
	IERG3080/ESTR3308	3
	IERG4998/ESTR4998	3
	Major Elective(s): 2 electives	5
College General Education: 1 course	3	
Free Elective(s): 1 course	3	
	<i>Term total</i>	17
	2nd term	
	Major Required:	
	IERG3060	3
	IERG3810	1
	IERG4999/ESTR4999	3
	Major Elective(s): 2 electives	6
Language: ELTU3014	2	
Free Elective: 1 course	3	
	<i>Term total</i>	18
<i>Breakdown: Faculty Package + Major Required</i>		58
<i>Major Electives</i>		17
<i>University Core Requirement</i>		18
<i>Free Electives</i>		9
<i>(Exempted Units)</i>		(21)
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Explanatory Notes:

- * Non-JUPAS admittees and JUPAS with HKDSE Mathematics Extended Modules I or II are required to attend a Mathematics Placement Test. Students who fail or are absent from the Placement Test will be required to take MATH1020 in the same term when they take MATH1510.
- [a] The compulsory Physics course shall be taken in accordance with students' HKDSE results or placement test results as follows:
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 - ii) Students with HKDSE results but did not attain the academic levels as stated in (i) shall take PHYS1003.
 - iii) Students without HKDSE results shall sit for the placement test arranged by the Department of Physics. Students who pass the placement test shall take ENGG1310/ESTR1003 or PHYS1110. Students who fail or are absent from the placement test shall take PHYS1003.

c) Recommended for those who have 21 units of exemption, including ELTU2014:

University Core Requirements	Exemption for Students	Units need to be fulfilled
English (9 units)	7 units	2 units
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39 units	Total unit exemption: 21 units	Total: 18 units

	Recommended Course Pattern	Units
First Year of Attendance	1st term Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510* IERG2080/ESTR2306 PHYS1003 /PHYS1110[a] College General Education: 1 course Physical Education	3 3 2 3 3 1
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	<i>Term total</i>	16
Second Year of Attendance	1st term Major Required: ENGG2420/ESTR2000 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 IERG3310/ESTR3310 IERG3800 General Education: UGEA	3 1 3 3 3 1 3
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	<i>Term total</i>	16

	Summer term General Education: 1 course	3
	<i>Term total</i>	3
Third Year of Attendance	1st term	
	Major Required: IERG3080/ESTR3308	3
	IERG4998/ESTR4998	3
	Major Elective(s): 2 electives	5
	College General Education: 1 course	3
Free Elective(s): 1 course	3	
	<i>Term total</i>	17
	2nd term	
Major Required: IERG3060	3	
IERG3810	1	
IERG4999/ESTR4999	3	
Major Elective(s): 2 electives	6	
Language: ELTU3014	2	
Free Elective(s): 1 course	3	
	<i>Term total</i>	18
	<i>Breakdown: Faculty Package + Major Required</i>	58
	<i>Major Electives</i>	17
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d) Recommended for those who have 18 units of exemption

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	2nd term Major Required: ENGG2310/ESTR2300 ENGG2470/ESTR2000 IERG3820 Major Elective(s): 2 electives Language: ELTU2014	3 3 1 6 3
	<i>Term total</i>	18
	Summer term Free Elective(s): 2 courses	6

		6
Third Year of Attendance	1st term	
	Major Required: IERG3080/ESTR3308	3
	IERG4998/ESTR4998	3
	Major Elective(s): 2 electives	5
	College General Education: 1 course	3
General Education: 1 course	3	
	<i>Term total</i>	17
	2nd term	
Major Required: IERG3060	3	
IERG3810	1	
IERG4999/ESTR4999	3	
Major Elective(s): 2 electives	6	
Language: ELTU3014	2	
Free Elective(s): 1 course	3	
	<i>Term total</i>	18
	<i>Breakdown: Faculty Package + Major Required</i>	58
	<i>Major Electives</i>	17
	<i>University Core Requirement</i>	21
	<i>Free Electives</i>	9
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Course List

<i>Course Code</i>	<i>Course Title</i>	<i>Unit(s)</i>
CHEM1380	Basic Chemistry for Engineers	3
CSCI1120/ESTR1100	Introduction to Computing Using C++	3
CSCI1130/ESTR1102	Introduction to Computing Using Java	3
CSCI1140	Programming Laboratory	1
CSCI2100/ESTR2102	Data Structures	3
CSCI3150/ESTR3102	Introduction to Operating Systems	3
CSCI3160/ESTR3104	Design and Analysis of Algorithms	3
CSCI3320	Fundamentals of Machine Learning	3
CSCI4180	Introduction to Cloud Computing and Storage	3
CSCI4190	Introduction to Social Networks	3
ELEG5491	Introduction to Deep Learning	3
ELTU2014	English for Engineering I	3
ELTU3014	English for Engineering II	2
ENGG1100/ESTR1000	Introduction to Engineering Design	3
ENGG1110/ESTR1002	Problem Solving by Programming	3
ENGG1310/ESTR1003	Engineering Physics: Electromagnetics, Optics and Modern Physics	3
ENGG1410/ESTR1004	Linear Algebra and Vector Calculus for Engineers	3
ENGG1820	Engineering Internship	1
ENGG2310/ESTR2300	Principles of Communication Systems	3
ENGG2420/ESTR2000	Complex Analysis and Differential Equations for Engineers	3
ENGG2470/ESTR2012	Probability for Engineers	3
ENGG5301	Information Theory	3
ENGG5302	Random Processes	3
ENGG5303	Advanced Wireless Communications	3
ENGG5383	Applied Cryptography	3
ENGG5392	Lightwave System Technologies	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	2
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
IERG3830	Product Design and Development	3
IERG4004	E-payment Systems and Cryptocurrency Technologies	3
IERG4030/ESTR4320	Optical Communications	3

<i>Course Code</i>	<i>Course Title</i>	<i>Unit(s)</i>
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
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
IERG5270	Advanced Topics in P2P Networks and Systems	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
IERG5590	Advanced Topics in Blockchain	3
LSCII001	Basic Concepts in Biological Sciences	3
LSCII003	Life Sciences for Engineers	3
MATH1020	General Mathematics	3
MATH1510	Calculus for Engineers	3
PHYS1003	General Physics for Engineers	3
PHYS1110	Engineering Physics: Mechanics and Thermodynamics	3
UGFH1000/ UGFN1000	University General Education Foundation Course	3

Remarks:

^ Equivalent to ENGG4030 offered in 2017-18 and before.