

**THE CHINESE UNIVERSITY OF HONG KONG**  
**Department of Information Engineering**

**Suggested Study Plan for Advanced Standing to FYFD Places  
with Various Entrance Qualifications (2020)**

- |   |           |
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**a) Recommended course pattern for those who have 24 units of exemption:**

University Core Requirements	Unit Exemption	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	<b>Total: 24 units</b>	<b>Total: 15 units</b>

	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	<u><b>1<sup>st</sup> term</b></u> Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510* IERG2080/ESTR2306 College General Education: 1 course Free Elective(s): 1 course	 3  3 3 3 3
	<i>Term total</i>	<b>15</b>
	<u><b>2<sup>nd</sup> term</b></u> Faculty Package: ENGG1120/ESTR1005, ENGG1130/ESTR1006 Major Required: CSCI2100/ESTR2102 IERG2602 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[a], 1110[a], SEEM2440/ESTR2500, SEEM2460/ESTR2540 General Education: UGFH1000 or UGFN1000 Physical Education	 6  3 1 2-3   3 1
	<i>Term total</i>	<b>16-17</b>

<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2440/ESTR2004 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 IERG3080/ESTR3308 General Education: UGEA	3 1 3 3 3 3
	<i>Term total</i>	<b>16</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG2310/ESTR2300 IERG2470/ESTR2308 IERG3310/ESTR3310 IERG3800 IERG3820 Language: ELTU3014 Free Elective(s): 1 course	3 3 3 1 1 2 3
	<i>Term total</i>	<b>16</b>
<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: IERG4998/ESTR4998 Major Elective(s): 4 electives College General Education: 1 course	3 12 3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 3 electives Free Elective(s): 1 course	3 1 3 8 3
	<i>Term total</i>	<b>18</b>
<i>Breakdown: Faculty Package + Major Required</i>		55-56
<i>Major Electives</i>		20
<i>University Core Requirement</i>		15
<i>Free Electives</i>		9
<i>(Exempted Units)</i>		(24)
		<b>123</b>

Explanatory Notes:

- \* Non-JUPAS and JUPAS admittees 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 optional 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	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	<b>Total: 21 units</b>	<b>Total: 18 units</b>

	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	<b>1<sup>st</sup> term</b> Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510* IERG2080/ESTR2306 College General Education: 1 course Free Elective(s): 1 course	3  3 3 3 3
	<i>Term total</i>	<b>15</b>
	<b>2<sup>nd</sup> term</b> Faculty Package: ENGG1120/ESTR1005, ENGG1130/ESTR1006 Major Required: CSCI2100/ESTR2102 IERG2602 Any one from AIST1110, CHEM1280, 1380, CSCII120/ESTR1100, CSCII130/ESTR1102, ELEG2700, ENGG1310/ESTR1003, ENGG2720/ESTR2014, ENGG2740/ESTR2016, ENGG2780/ESTR2020, FTEC2101/ESTR2520, LSCI1001, 1003, MAEG1020, PHYS1003[a], 1110[a], SEEM2440/ESTR2500, SEEM2460/ESTR2540 Language: ELTU2014 Physical Education	6  3 1 2-3  3 1
	<i>Term total</i>	<b>16-17</b>
<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2440/ESTR2004 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 IERG3080/ESTR3308 General Education: UGEA	3 1 3 3 3 3
	<i>Term total</i>	<b>16</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG2310/ESTR2300 IERG2470/ESTR2308 IERG3310/ESTR3310 IERG3800 IERG3820 Language: ELTU3014	3 3 3 1 1 2
	<i>Term total</i>	<b>16</b>

	Free Elective(s): 1 course	3
	<i>Term total</i>	<b>16</b>
	<b>Summer term</b> General Education: UGFH1000 or UGFN1000	3
	<i>Term total</i>	<b>3</b>
<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: IERG4998/ESTR4998	3
	Major Elective(s): 4 electives	12
	College General Education: 1 course	3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG3060 IERG3810 IERG4999/ESTR4999	3 1 3
Major Elective(s): 3 electives	8	
Free Elective: 1 course	3	
	<i>Term total</i>	<b>18</b>
<i>Breakdown: Faculty Package + Major Required</i>		55-56
<i>Major Electives</i>		20
<i>University Core Requirement</i>		18
<i>Free Electives</i>		9
<i>(Exempted Units)</i>		(21)
		<b>123</b>

Explanatory Notes:

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- [a] The optional 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	Unit Exemption	Units need to be fulfilled
English (9 units)	7 units	2 units
Chinese (6 units)	6 units	0 units
UGE (15 units)	6 units	9 units
CGE (6 units)	No exemption	6 units
IT (1 unit)	1 unit	0 units
PE (2 units)	1 unit	1 unit
39 units	<b>Total: 21 units</b>	<b>Total: 18 units</b>

	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	<b>1<sup>st</sup> term</b> Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510* IERG2080/ESTR2306 College General Education: 1 course Free Elective(s): 1 course	3  3 3 3 3
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	<i>Term total</i>	<b>16-17</b>
<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2440/ESTR2004 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 IERG3080/ESTR3308 General Education: UGEA	3 1 3 3 3 3
	<i>Term total</i>	<b>16</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG2310/ESTR2300 IERG2470/ESTR2308 IERG3310/ESTR3310 IERG3800 IERG3820 Language: ELTU3014 Free Elective(s): 1 course	3 3 3 1 1 2 3
	<i>Term total</i>	<b>16</b>

	<b>Summer term</b> General Education: 1 course	3
	<i>Term total</i>	<b>3</b>
<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: IERG4998/ESTR4998	3
	Major Elective(s): 4 electives	12
	College General Education: 1 course	3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG3060 IERG3810 IERG4999/ESTR4999	3 1 3
Major Elective(s): 3 electives	8	
Free Elective(s): 1 course	3	
	<i>Term total</i>	<b>18</b>
<i>Breakdown: Faculty Package + Major Required</i>		55-56
<i>Major Electives</i>		20
<i>University Core Requirement</i>		18
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<i>(Exempted Units)</i>		(21)
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**d) Recommended for those who have 18 units of exemption**

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

	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	<b>1<sup>st</sup> term</b> Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510* IERG2080/ESTR2306 College General Education: 1 course Free Elective(s): 1 course	3   3 3 3 3
	<i>Term total</i>	<b>15</b>
	<b>2<sup>nd</sup> term</b> Faculty Package: ENGG1120/ESTR1005, ENGG1130/ESTR1006 Major Required: CSCI2100/ESTR2102 IERG2602 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[a], 1110[a], SEEM2440/ESTR2500, SEEM2460/ESTR2540 Language: ELTU2014 Physical Education	6   3 1 2-3   3 1
	<i>Term total</i>	<b>16-17</b>
<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2440/ESTR2004 IERG1810 IERG2051/ESTR2302 IERG2060/ESTR2304 IERG3080/ESTR3308 General Education: UGEA	3 1 3 3 3 3 3
	<i>Term total</i>	<b>16</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG2310/ESTR2300 IERG2470/ESTR2308 IERG3310/ESTR3310 IERG3800 IERG3820 Language: ELTU3014 Free Elective(s): 1 course	3 3 3 1 1 2 3
	<i>Term total</i>	<b>16</b>

	<b>Summer term</b> General Education: UGFH1000 or UGFN1000 Free Elective(s): 1 course	3 3
		<b>6</b>
<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: IERG4998/ESTR4998 Major Elective(s): 3 electives College General Education: 1 course General Education: 1 course	3 9 3 3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 4 electives	3 1 3 11
	<i>Term total</i>	<b>18</b>
	<i>Breakdown: Faculty Package + Major Required</i> <i>Major Electives</i> <i>University Core Requirement</i> <i>Free Electives</i> <i>(Exempted Units)</i>	55-56 20 21 9 (18)
		<b>123</b>

Explanatory Notes:

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## Course List

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

<i>Course Code</i>	<i>Course Title</i>	<i>Unit(s)</i>
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

<i>Course Code</i>	<i>Course Title</i>	<i>Unit(s)</i>
IERG3830	Product Design and Development	3
IERG4030	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
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