

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

**Suggested Study Plan for Advanced Standing to FYFD Places  
with Various Entrance Qualifications (2017)**

- |   |           |
|---|-----------|
| 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  |
| c) Recommended for those who have 21 units of exemption, including ELTU2014   | Page 5-6  |
| d) Recommended for those who have 18 units of exemption   | Page 7-8  |
| e) Course List  | Page 9-10 |

**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	<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 PHYS1003/PHYS1110[a] College General Education: 1 course Physical Education	 3  3 2 3 3 1
	<i>Term total</i>	<b>15</b>
	<u><b>2<sup>nd</sup> term</b></u> 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>	<b>16</b>

<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b>	
	Major Required: ENGG2420/ESTR2000 IERG1810 IERG2060 IERG3310 IERG3800 General Education: UGEA Free Elective(s): 1 course	3 1 3 3 1 3 3
	<i>Term total</i>	<b>17</b>
	<b>2<sup>nd</sup> term</b>	
	Major Required: ENGG2470/ESTR2012 IERG2051/ESTR2302 Major Elective(s): 2 electives Free Elective: 2 courses	3 3 6 6
	<i>Term total</i>	<b>18</b>
<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b>	
	Major Required: ENGG2310/ESTR2300 IERG3820 IERG3080 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	3 1 3 3 5 3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b>	
	Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 2 electives Language: ELTU3014	3 1 3 6 2
	<i>Term total</i>	<b>15</b>
<b>Faculty Package + Major Required</b>		<b>58</b>
<b>Major Electives</b>		<b>17</b>
<b>University Core Requirement</b>		<b>15</b>
<b>Free Electives</b>		<b>9</b>
<b>(Exempted Units)</b>		<b>(24)</b>
		<b>123</b>

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] Non-JUPAS students will be assigned to take either PHYS1003 or 1110 according to advice of the Engineering Physics Panel.

Students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component shall take either ENGG1310/ESTR1003 or PHYS1110. Students without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics Component shall take PHYS1003 in advance.

**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	<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 PHYS1003 /PHYS1110[a] College General Education: 1 course Physical Education	3  3 2 3 3 1
	<i>Term total</i>	<b>15</b>
	<b>2<sup>nd</sup> term</b> 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>	<b>16</b>
<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2420/ESTR2000 IERG1810 IERG2060 IERG3310 IERG3800 General Education: UGEA Free Elective(s): 1 course	3 1 3 3 1 3 3
	<i>Term total</i>	<b>17</b>
	<b>2<sup>nd</sup> term</b> Major Required: ENGG2470/ESTR2012 IERG2051/ESTR2302 Major Elective(s): 2 electives Free Elective: 1 course Language: ELTU2014	3 3 6 3 3
	<i>Term total</i>	<b>18</b>

<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b>	
	Major Required: ENGG2310/ESTR2300 IERG3820 IERG3080 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	3 1 3 3 5 3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b>	
	Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 2 electives Language: ELTU3014	3 1 3 6 2
	<i>Term total</i>	<b>15</b>
	<b>Faculty Package + Major Required</b>	<b>58</b>
	<b>Major Electives</b>	<b>17</b>
	<b>University Core Requirement</b>	<b>18</b>
	<b>Free Electives</b>	<b>9</b>
	<b>(Exempted Units)</b>	<b>(21)</b>
		<b>123</b>

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] Non-JUPAS students will be assigned to take either PHYS1003 or 1110 according to advice of the Engineering Physics Panel.

Students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component shall take either ENGG1310/ESTR1003 or PHYS1110. Students without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics Component shall take PHYS1003 in advance.

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
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	Total unit exemption: 21 units	<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 PHYS1003 /PHYS1110[a] College General Education: 1 course Physical Education	3 3 2 3 3 1
	<i>Term total</i>	<b>15</b>
	<b>2<sup>nd</sup> term</b> Faculty Package: ENGG1100/ESTR1000, ENGG1410/ESTR1004 IERG2602 Major Required: CSCI2100/ESTR2102 Any one from CHEM1380/CSCII120/1130/ENGG1310/ ESTR1003/1100/1102/LSCII001/1003/PHYS1110 General Education: UGFH1000 or UGFN1000	3 3 1 3 3 3
	<i>Term total</i>	<b>16</b>
<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2420/ESTR2000 IERG1810 IERG2060 IERG3310 IERG3800 General Education: UGEA Free Elective(s): 1 course	3 1 3 3 1 3 3
	<i>Term total</i>	<b>17</b>
	<b>2<sup>nd</sup> term</b> Major Required: ENGG2470/ESTR2012 IERG2051/ESTR2302 Major Elective(s): 2 electives General Education: 1 course Free Elective(s): 1 course	3 3 6 3 3
	<i>Term total</i>	<b>18</b>

<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2310/ESTR2300 IERG3820 IERG3080 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	3 1 3 3 5 3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b> Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 2 electives Language: ELTU3014	3 1 3 6 2
	<i>Term total</i>	<b>15</b>
<b>Faculty Package + Major Required</b>		<b>58</b>
<b>Major Electives</b>		<b>17</b>
<b>University Core Requirement</b>		<b>18</b>
<b>Free Electives</b>		<b>9</b>
<b>(Exempted Units)</b>		<b>(21)</b>
		<b>123</b>

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] Non-JUPAS students will be assigned to take either PHYS1003 or 1110 according to advice of the Engineering Physics Panel.

Students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component shall take either ENGG1310/ESTR1003 or PHYS1110. Students without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics Component shall take PHYS1003 in advance.

d) Recommended for those who have 18 units of exemption

University Core Requirements	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)	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	Total unit exemption: 18 units	<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 PHYS1003 /PHYS1110[a] College General Education: 1 course Physical Education	3 3 2 3 3 1
	<i>Term total</i>	<b>15</b>
	<b>2<sup>nd</sup> term</b> Faculty Package: ENGG1100/ESTR1000 ENGG1410/ESTR1004 IERG2602 Major Required: CSCI2100/ESTR2102 Any one from CHEM1380/CSCII120/1130/ENGG1310/ ESTR1003/1100/1102/LSCII001/1003/PHYS1110 General Education: UGFH1000 or UGFN1000	3 3 1 3 3 3
	<i>Term total</i>	<b>16</b>
<b>Second Year of Attendance</b>	<b>1<sup>st</sup> term</b> Major Required: ENGG2420/ESTR2000 IERG1810 IERG2060 IERG3310 IERG3800 General Education: UGEA Free Elective: 1 course	3 1 3 3 1 3 3
	<i>Term total</i>	<b>17</b>
	<b>2<sup>nd</sup> term</b> Major Required: ENGG2470/ESTR2000 IERG2051/ESTR2302 Major Elective(s): 2 electives General Education: 1 course Language: ELTU2014	3 3 6 3 3
	<i>Term total</i>	<b>18</b>

<b>Third Year of Attendance</b>	<b>1<sup>st</sup> term</b>	
	Major Required: ENGG2310/ESTR2300 IERG3820 IERG3080 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	3 1 3 3 5 3
	<i>Term total</i>	<b>18</b>
	<b>2<sup>nd</sup> term</b>	
	Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 2 electives Language: ELTU3014	3 1 3 6 2
	<i>Term total</i>	<b>15</b>
	<b>Faculty Package + Major Required</b>	<b>58</b>
	<b>Major Electives</b>	<b>17</b>
	<b>University Core Requirement</b>	<b>21</b>
	<b>Free Electives</b>	<b>9</b>
	<b>(Exempted Units)</b>	<b>(18)</b>
		<b>123</b>

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] Non-JUPAS students will be assigned to take either PHYS1003 or 1110 according to advice of the Engineering Physics Panel.

Students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component shall take either ENGG1310/ESTR1003 or PHYS1110. Students without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics Component shall take PHYS1003 in advance.



## 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
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
ENGG4030/ESTR4300	Web-scale Information Analytics	3
IERG1810	Electronic Circuit Design Laboratory	1
IERG2051/ESTR2302	Signals and Systems	3
IERG2060	Basic Analog and Digital Circuits	3
IERG2080	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	Information and Software Engineering Practice	3
IERG3280/ESTR3302	Networks: Technology, Economics, and Social Interactions	3
IERG3300/ESTR3304	Introduction to Stochastic Processes	3
IERG3310	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 Project	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

<i>Course Code</i>	<i>Course Title</i>	<i>Unit(s)</i>
IERG4210	Web Programming and Security	3
IERG4220	Secure Software Engineering	3
IERG4230	Introduction to Internet of Things	3
IERG4330/ESTR4316	Programming Big Data Systems	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/ENGG5392	Lightwave System Technologies	3
IERG5090	Advanced Networking Protocols and Systems	3
IERG5100/ENGG5303	Advanced Wireless Communications	3
IERG5130	Probabilistic Models and Inference Algorithms for Machine Learning	3
IERG5140	Lightwave Networks	3
IERG5154/ENGG5301	Information Theory	3
IERG5200	Channel Coding and Modulation	3
IERG5240/ENGG5383	Applied Cryptography	3
IERG5270	Advanced Topics in P2P Networks and Systems	3
IERG5280	Mobile Networking	3
IERG5290	Network Coding Theory	3
IERG5300/ENGG5302	Random Processes	3
IERG5310	Security and Privacy in Cyber Systems	3
IERG5320	Digital Forensics	3
IERG5330	Network Economics	3
IERG5590	Advanced Topics in Blockchain	3
LSCI1001	Basic Concepts in Biological Sciences	3
LSCI1003	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