THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering

Suggested Study Plan for Advanced Standing to FYFD Places
with Various Entrance Qualifications (2015)

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 Major Required: MATH1510 CSCI1140 PHYS1003/PHYS1110[a] College General Education: 1 course Physical Education	 3 3 1 3 3 1
	Term total	**14**
	2nd term Faculty Package: ENGG1100/ESTR1000 ENGG2601 ENGG2602 Major Required: ENGG1410/ESTR1004 CSCI2100/ESTR2102 Any one from CHEM1070/1280/1380/CSCI1120/1130/ ENGG1310/ESTR1003/LSCI1003/SEEM2460 General Education: UGFH1000 or UGFN1000	 3 2 1 3 3 3 3
	Term total	**18**

Second Year of Attendance	**1st term** Major Required:		
	ENGG2460/ESTR2010		3
	IERG2060		3
	IERG3310		3
	IERG3800		1
	General Education: UGEA		3
	Free Elective(s): 1 course		3
		Term total	**16**
	2nd term Major Required:		
	ENGG2430/ESTR2002		3
	IERG2051/ESTR2302		3
	Major Elective(s): 2 electives		6
	Free Elective: 2 courses		6
		Term total	**18**
Third Year of Attendance	**1st term** Major Required:		
	ENGG2310/ESTR2300		3
	IERG3820		1
	IERG3080		3
	IERG4998/ESTR4998		3
	Major Elective(s): 2 electives		5
	College General Education: 1 course		3
		Term total	**18**
	2nd term Major Required:		
	IERG3060		3
	IERG3810		1
	IERG4999/ESTR4999		3
	Major Elective(s): 2 electives		6
	Language: ELTU3014		2
		Term total	**15**

Breakdown: Faculty Package + Major Required	*58*
Major Electives	*17*
University Core Requirement	*15*
Free Electives	*9*
(Exempted Units)	*(24)*
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Explanatory Notes:

[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	**Total: 18 units**

	Recommended Course Pattern	Units
First Year of Attendance	**1st term** Faculty Package: ENGG1110/ESTR1002 Major Required: MATH1510 CSCI1140 PHYS1003 /PHYS1110[a] College General Education: 1 course Physical Education	 3 3 1 3 3 1
	Term total	**14**
	2nd term Faculty Package: ENGG1100/ESTR1000 ENGG2601 ENGG2602 Major Required: ENGG1410/ESTR1004 CSCI2100/ESTR2102 Any one from CHEM1070/1280/1380/CSCI1120/1130/ ENGG1310/ESTR1003/LSCI1003/SEEM2460 General Education: UGFH1000 or UGFN1000	 3 2 1 3 3 3 3
	Term total	**18**
Second Year of Attendance	**1st term** Major Required: ENGG2460/ESTR2010 IERG2060 IERG3310 IERG3800 General Education: UGEA Free Elective(s): 1 course	 3 3 3 1 3 3
	Term total	**16**
	2nd term Major Required: ENGG2430/ESTR2002 IERG2051/ESTR2302 Major Elective(s): 2 electives Free Elective(s): 1 course Language: ELTU2014	 3 3 6 3 3
	Term total	**18**

Third Year of Attendance	**1st term** Major Required: ENGG2310/ESTR2300 IERG3820 IERG3080 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	 3 1 3 3 5 3
	Term total	**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
	Term total	**15**
	Breakdown: Faculty Package + Major Required	*58*
	Major Electives	*17*
	University Core Requirement	*18*
	Free Electives	*9*
	(Exempted Units)	*(21)*
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	Recommended Course Pattern	Units
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Second Year of Attendance	**1ˢᵗ term** Major Required: ENGG2460/ESTR2010 IERG2060 IERG3310 IERG3800 General Education: UGEA Free Elective(s): 1 course	 3 3 3 1 3 3
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Third Year of Attendance	<u>**1st term**</u> Major Required: ENGG2310/ESTR2300 IERG3820 IERG3080 IERG4998/ESTR4998 Major Elective(s): 2 electives College General Education: 1 course	 3 1 3 3 5 3
	Term total	**18**
	<u>**2nd term**</u> Major Required: IERG3060 IERG3810 IERG4999/ESTR4999 Major Elective(s): 2 electives Language: ELTU3014 Free Elective(s): 1 course	 3 1 3 6 2 3
	Term total	**15**
	Breakdown: Faculty Package + Major Required *Major Electives* *University Core Requirement* *Free Electives* *(Exempted Units)*	*58* *17* *18* *9* *(21)*
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	Term total	**16**
	2nd term Major Required: ENGG2430/ESTR2002 IERG2051/ESTR2302 Major Elective(s): 2 electives General Education: 1 course Language: ELTU2014	 3 3 6 3 3
	Term total	**18**
	Summer term Free Elective(s): 1 course	 3
	Term total	**3**

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

Course Code	Course Title	Unit(s)
CHEM1070	Principles of Modern Chemistry	3
CHEM1280	Introduction to Organic Chemistry and Biomolecules	3
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
ENGG2430/ESTR2002	Probability and Statistics for Engineers	3
ENGG2460/ESTR2010	Complex Numbers, Differential Equations, and Discrete Mathematics for Engineers	3
ENGG2601	Technology, Society and Engineering Practice	2
ENGG2602	Engineering Practicum	1
IERG2051/ESTR2302	Signals and Systems	3
IERG2060/ESTR2304	Basic Analog and Digital Circuits	3
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
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

Course Code	Course Title	Unit(s)
IERG4230	Introduction to Internet of Things	3
IERG4300/ESTR4300 ^	Web-scale Information Analytics	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
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
IERG5340	IT Innovation and Entrepreneurship	3
IERG5590	Advanced Topics in Blockchain	3
LSCI1001	Basic Concepts in Biological Sciences	3
LSCI1003	Life Sciences for Engineers	3
MATH1510	Calculus for Engineers	3
PHYS1003	General Physics for Engineers	3
PHYS1110	Engineering Physics: Mechanics and Thermodynamics	3
SEEM2460	Introduction to Data Science	3
UGFH1000/ UGFN1000	University General Education Foundation Course	3