BEng in Information Engineering 2017/18 Entering Major

The offering schedule specified below is under normal circumstances, and might be subject to change due to different timetabling and teaching assignment constraints in different years. Students may take it as reference and please pay attention to the master class schedule announced by the Academic Regulations and Records Office (ARRO) prior to each semester for course registration and add/drop arrangement. Also, courses will be arranged in day or evening sessions catering for the different timetable patterns of students.

A/ Core Courses

Pre-	Pre-	Offered				Cont	act Hou	rs	С	X	Exam		Equivalent	
cursor	requisite	in Sem	Course Code & Title	CU	Lec	Tut	Lab	Ttl	%	%	Dur	W	Course	Remark
MA1201 or MA1301 (Note a)	MA1200 or MA1300 (Note a)	A & B A & B	EE2000 Logic Circuit Design EE2108 Engineering Analysis	3	39 39	13 13	15 0	67 52	40 50	60 50	2 2	1		Note 2 Note 1
	CS1102 or CS1302 (Note a)	A & B	CS2311 [∆] Computer Programming	3	26	0	26	52	40	60	2	1		Note 3
	(MA1200 or MA1300) & (MA1201 or MA1301) or (Note b)	A & B	MA2001 Multi-variable Calculus and Linear Algebra	3	39	13	0	52	30	70	2	1		Note 3
	(Note a)	A & B	EE1003 Introduction to Electronic Design and Workshop	3	26	0	18	44	50	50	2	1		Note 2
	EE2000 & CS2311	A & B	EE2004 Microcomputer Systems	3	39	8/13	15	62/67	40	60	2	1		Note 7
		A & B	EE2301 Basic Electronic Circuit	3	39	13	15	67	50	50	2	1		Note 2
	CS2311 MA2001	A & B B	EE2331 Data Structures and Algorithms MA3160 Probability and Stochastic Processes	3	<mark>39</mark> 39	<mark>26</mark> 7	<mark>0</mark> 0	<mark>65</mark> 46	40 30	<mark>60</mark> 70	2.5 2	1 1		Note 1 Note 3
	EE2331	A & B	EE3206 Java Programming and Applications	3	26	26	0	52	50	50	2.5	1		Note 1
EE2000 EE2004 & CS2311	MA2001	A & B A & B A & B	EE3009 Data Communications and Networking EE3210 Signals and Systems CS3103 Operating Systems	3 3	26 26 26	13 13 13	0 0	51 39 39	40 40 40	60 60 60	2 2 2	1 1 1		Note 2 Note 1 Note 3
	MA2001 & EE3210 (Note c)	A & B	EE3008 Principles of Communications	3	26	13	0	39	30	70	2	1		Note 1
MA2001	(MA1201 or MA1301) or (Note b) & MA3160 (Note c)	A & B	EE3313 Applied Queueing Systems	3	26	13	0	39	30	70	2	1		Note 1
	EE3009	В	EE3315 Internet Technology	3	26	9	12	47	30	70	2	1		Note 2
	<u>Part I</u> : CS2311	A	EE3316 Information Product Design	1.5	0	0	39	39	100	0	-	1		Note 5
	Part II: EE3316 Part I & EE2004	В	EE3316 Information Product Design	1.5	0	0	39	39	100	0	-	1		Note 5
	CS2311	A & B	CS3402 Database Systems	3	26	13	0	39	40	60	2	1		Note 3

Pre-	Pre-	Offered					Cont	act Hou	's	C	X	Exam		Equivalent	
cursor	requisite	in Sem	Course Co	ode & Title	CU	Lec	Tut	Lab	Ttl	%	%	Dur	W	Course	Remark
	EE4093 (Note d)		ЕЕ3012 ^Ф ЕЕ4381	Engineers in Society Project	<mark>3</mark>	18 Other ac	8 tivities:	0 208	<mark>26</mark> 352	50 100	<mark>50</mark>	1.5	<u>1</u> 1		Note 1 Note 8*
	CS2311	S	EE4093	Engineering Training I for Information	0	144 0	0	70	70	100	0	-	1		Note 6
	(Note e)	S	EE4095	Engineering Engineering Training II for Information Engineering	0	0	0	**		100	0	-	1		Note 6

Remarks for Pre-requisite, Co-requisite:

Note a: Applicable to Normative 4-year degree students only

Note b: Advanced Standing I and II (ASI and II) students without relevant mathematical background are required to take 6 credit units of College-specified courses namely MA1200 Calculus & Basic Linear Algebra I/ MA1300 Enhanced Calculus & Linear Algebra I AND MA1201 Calculus & Basic Linear Algebra II/ MA1301 Enhanced Calculus & Linear Algebra II, unless they pass the placement test offered by Mathematics Department. Students granted exemption on either one or both of the course(s) should take any course(s) not within the Major Requirement (including core courses and electives) to make up for the minimum curriculum requirement.

Note c: Co-requisite: to be taken before or together with the course.

Note d: At least 63 credit units (Normative 4–year degree) of the Major Requirement, College Requirement and College-specified GE Courses have been completed / 39 credit units (ASI) / 36 credit units (ASII) of the Major Requirement have been completed. (Major requirement excludes Gateway Education and Language requirements). Credits of exempted courses for ASI & II are counted regardless of the completion time of replacement courses. Students completed full requirement in College-specified GE courses (MA1200/MA1201/MA1300/MA1301) can have one course counted towards the credit unit requirement specified above.

Note e: EE4095 (Part A Industrial Attachment Scheme): EE4093; EE3206 and Pre-attachment Training

EE4095 (Part B In-house Training): EE4093 and EE3206

EE4095 (Part C Summer Placement Scheme): EE4093 and EE3206

Remarks for course assessment:

- Note 1: To pass the course, students are required to achieve at least 30% in coursework and 30% in the examination.
- Note 2: To pass the course, students are required to achieve at least 30% in coursework and 30% in the examination. Also, 75% laboratory attendance rate must be obtained.
- Note 3: For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.
- Note 4: To pass the course, students are required to achieve at least 50% in quizzes, 50% in presentation and 50% in reports and other assignments.
- Note 5: To pass the course, students are required to achieve at least 40% of the coursework mark and a laboratory attendance of at least 75% recorded.
- Note 6: Pass/Fail Basis. To pass the course, students are required to have a laboratory attendance of 100% recorded.
- Note 7: To pass the course, students are required to achieve at least 30% in coursework and 30% in the examination. When the laboratory experiments are involved in Teaching and Learning Activities (TLA), 75% laboratory attendance rate must be obtained. When the mini-project is involved in TLA, 75% tutorial attendance rate must be obtained.
- Note 8: To pass the course, students are required to (i) conduct an oral presentation, (ii) achieve an overall pass (D) grade or above, and (iii) both supervisor and assessor have not assigned a final Fail Grade.

Other remarks:

- * Students undertaking Co-operative Education Scheme (CES) Placement Project should register on EE4381 Project to fulfil the Final Year Project requirement.
- ** Part A (Industrial Attachment Scheme): 9-13 weeks; Part B (In-house Training): 5 weeks (150 contact hours)
- Δ Waived for Advanced Standing II students
- Φ Students having completed EE4081 Professional Internship Program (6CU) are not required to take EE3012 Engineers in Society (3CU) and one other elective (3CU). For those who have completed 12-month internship in EE4081 are not required to take EE4095 Engineering Training II for Information Engineering.

B/ Technical Electives

Students are required to take at least FIVE technical electives of which no more than ONE Level-3 elective should be taken.

Communications and Networking

Pre-	Pre-	Offered				(Contact Hour	'S	С	X	Exam		Equivalent	
cursor	requisite	in Sem	Course Co	de & Title	CU	Lec	Tut/Lab	Ttl	%	%	Dur	W	Course	Remarks
	EE3008	A	EE4036	Wireless Communications	3	39	0	39	30	70	2	1		Note 1
	EE3313	A	EE4011	Performance Evaluation of	3	26	13/0	39	30	70	2	1		Note-1
				Communication Networks										
	EE3009	A	EE4017	Internet Finance	3	26	13#/0	<mark>39</mark>	40	<mark>60</mark>	2	1		Note 1
	EE3009	A	EE4316	Mobile Data Networks	3	26	13/0	<mark>39</mark>	30	<mark>70</mark>	2	1		Note 1
	EE3009	В	EE4014	Business Data Communication Networks	3	26	13#/0	39	50	50	2	1		Note 2
EE3009	MA2001 &	B	EE4212	Information and Coding Cryptography	3	26	13/0	39	<mark>30</mark>	70	2	1		Note 1
	EE3313 or			and Information Theory (subject to								_		
	MA3160			<mark>approval</mark>										

Computer Systems and Information Processing

Pre-	Pre-	Offered				C	Contact Hour	rs	C	X	Exam		Equivalent	
cursor	requisite	in Sem	Course Co	de & Title	CU	Lec	Tut/Lab	Ttl	%	%	Dur	W	Course	Remarks
	CS2311	A	EE3209	Data Management Techniques	3	26	13/0	39	40	60	2	1		Note 1
	MA2001 &	A	EE4206	Digital Image Processing	3	26	13/0	39	30	70	2	1		Note 1
	EE3210	_									_			
	MA2001	A	EE4215	Security Cybersecurity Technology	3	31	<mark>5/3</mark>	39	40	60	2	1		Note 2
	EE3206 &	A	EE4221	Cloud Computing Systems	<mark>3</mark>	26	0/13	39	50	50	2	1		Note 2
	EE3009													
	EE3210	В	EE4015	Digital Signal Processing	3	39	0	39	40	60	2	1		Note 1
	MA2001	B	EE4016	Engineering Applications of Artificial	3	26	13/0	39	50	5 0	2	1		Note 1
		_		Intelligence	_						_			
	MA3160	B	EE4146	Data Informatics Engineering and	3	26	13/0	39	40	<mark>60</mark>	2	1		Note 1
		_		Learning Systems	_						_	_		
	MA2001 &	B	EE4211	Computer Vision	3	26	13/0	39	60	40	2	1		Note 1
	EE3210										_			
	EE2004 &	₽	EE4217	Digital Storage Technology	3	31	5/0	36	30	70	2	1		Note 1
	EE2331													
EE3009	CS2311 &	A or B	EE4222	Digital Forensics	3	26	13/15	54	40	60	2	1		Note 2
	EE2004													
	CS3402	A or B	CS4482	Advanced Database Systems	3	26	13/0	39	30	70	2	1		Note 3

Lab = Laboratory

Examination

Summer Semester/Semester A/Semester B

Lec = Lecture Exam Dur = Exam Duration GGPA Weighting (per CU) Note 1: To pass the course, students are required to achieve at least 30% in coursework and 30% in the examination.

Tutorial

CU = Credit Unit

Note 2: To pass the course, students are required to achieve at least 30% in coursework and 30% in the examination. Also, 75% laboratory attendance rate must be obtained.

Note 3: For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.

^{#:} Some of the tutorials will be conducted in the laboratory

Technical Electives: continued

Software Design and Development

Pre-	Pre-	Offered				C	Contact Hour	S	С	X	Exam		Equivalent	
cursor	requisite	in Sem	Course Co	de & Title	CU	Lec	Tut/Lab	Ttl	%	%	Dur	W	Course	Remarks
EE2331	MA2001 & CS2311	A	EE4208	Computer Graphics for Engineers	3	26	13#/0	39	40	60	2	1		Note 1
	EE3206	A	EE4304	iOS Mobile App Development and Networking	3	20	$0/19^{\pi}$	39	<mark>70</mark>	<mark>30</mark>	1.5	1		Note 2
EE2331		A	CS4335	Design and Analysis of Algorithms	3	26	13/0	39	30	70	2	1		Note 3
	CS2311	В	EE4213	Human-Computer Interaction	3	26	13#/0	39	40	60	2	1		Note 1
CS3103	EE3206 & CS3402	В	EE4216	Internet Client server Computing Modern Web Applications	3	<mark>26</mark>	13/0	<mark>39</mark>	<mark>60</mark>	<mark>40</mark>	2	1		Note 1
	CS2311	В	CS3391	Advanced Programming	3	3	9	39	60	40	3	1		Note 3
		S	CS4367	Computer Games Design	3	26	13/0	39	40	60	2	1		Note 3

C/ Optional One-year Internship

Pre-	Pre-	Offered				Contact Hours		Contact Hours		Contact Hours		X	Exam		Equivalent	
cursor	requisite	in Sem	Course Code	e & Title	CU	Lec	Lec Tut/Lab Ttl		%	%	Dur	W	Course	Remarks		
		A/B/S	EE4081	Professional Internship Program	6	8 -12 months		100	0	-	1		Φ			

<u>Key</u>: CU = Credit Unit Lec = Lecture Tut = Tutorial Lab = Laboratory C = Coursework X = Examination Exam Dur = Exam Duration W = GGPA Weighting (per CU) S/A/B = Summer Semester/Semester A/Semester B

π 3 hours workshop

: Some of the tutorials will be conducted in the laboratory

Note 1: To pass the course, students are required to achieve at least 30% in coursework and 30% in the examination.

Note 2: To pass the course, students are required to achieve at least 30% in the practical mid-term exam, 30% in the examination and a minimum of 75% laboratory attendance.

Note 3: For a student to pass the course, at least 30% of the maximum mark for the examination must be obtained.

Φ Students having completed EE4081 Professional Internship Program (6CU) will take one less elective (3CU) and are not required to take EE3012 Engineers in Society (3CU). For those who have completed 12-month internship in EE4081 are not required to take EE4095 Engineering Training II for Information Engineering.

D/ Gateway Education (GE)

_			(CU		Contact Hou	ırs	С	X	Exam		
Pre- requisite	Offered in Sem	Course Code & Title	Normative 4-year	ASI	ASII	Lec/Tut/Lab	Ttl	%	%	Dur (hrs)	W	Remarks
		GE English	degree									*
For GE1401 / GE2410 Level 4 in HKDSE English Language OR Grade D in HKALE AS Use of English OR EL0200B OR Grade B or above in EL0200A	B A	- GE1401 University English - GE2410 English for Engineering (Discipline-Specific English)	3 3	3 3	** 3	39 39	39 39	100 100	0 0	-	1 1	
	A/B/S	<u>Chinese Civilization</u> - GE1501 Chinese Civilisation – History and Philosophy	3	3	**	26/26	52	100	0	-	1	
	A/B/S	Gateway Education (Area Requirements) - Area 1: Arts and Humanities - Area 2: Study of Societies, Social and Business Organisations - Area 3: Science and Technology	12#	6#	3	Please refer to the	l ne cour	 rse info	 rmatior 	for details.	1	
	A/B/S	College-specified Courses - MA1200 Calculus and Basic Linear Algebra I/ MA1300 Enhanced Calculus and Linear Algebra I (3CUs) - MA1201 Calculus and Basic Linear Algebra II/ MA1301 Enhanced Calculus and Linear Algebra II (3CUs) - CS1102 Introduction to Computer Studies/ CS1302 Introduction to Computer Programming (3 CUs)	9	6^	6^							۸

English Language Requirement

* Normative 4-year degree and ASI students entering without Level 4 in HKDSE English Language or Grade D in HKALE AS Use of English are required to take EL0200A English for Academic Purposes 1 & EL0200B English for Academic Purposes 2 (EAP) of 6 credit units before progressing to GE1401 University English and GE2410 English for Engineering. Early exit arrangement is available that students achieving a grade B or above in their overall course results for EL0200A will be permitted to exit at this point and progress to the GE English courses.

The credits earned from the EAP course(s) will not be counted towards the minimum credit units required for graduation nor be calculated in students' CGPA. Students who are not admitted through JUPAS are invited upon enrolment to take the English Placement Test or to provide proof of alternative qualifications to be exempted from ELC course (http://www.cityu.edu.hk/elc/courses_exemption.html).

- ** Not necessary for Advanced Standing II students
- # Normative 4-year degree students are required to take a minimum of 3 CUs from each of the three areas. ASI students are required take their 6 CUs from two different areas.
- ASI and ASII students are required to take 6 credit units of MA courses from the above pairs. Students exempted from either one or both of the above MA courses should take any course(s) not within the Major Requirement (including core courses and electives) to make up for the minimum curriculum requirement.

E/ Language Requirements

Pre-	Pre-	Offered			Contact Ho		C	X	Exam		Remarks
cursor	requisite	in Sem	Course Code & Title	CU	Lec/Tut/Lab	Ttl	%	%	Dur (hrs)	W	Kemarks
			English Language Requirement								
	Level 3 in HKDSE English Language OR	A/B	- EL0200A English for Academic Purposes 1**	3	39	39	35	65	-	0	*
	Grade E in HKALE AS										
	Use of English as										
	determine by English										
	Language Centre										
	EL0200A	B/S	- EL0200B English for Academic Purposes 2 **	3	39	39	60	40	-	0	*
			Chinese Language Requirement								
	Level 3 in HKDSE	A/B/S	- CHIN1001 University Chinese I**	3	39	39	100	0	_	0	@
	Chinese Language OR										
	Grade E in HKALE AS										
	Chinese Language and										
	Culture CU = Credit Unit		 ec = Lecture		C = Co	ursewo		X	Examina		

<u>Key</u>: CU = Credit Unit Lec = Lecture Tut = Tutorial Lab = Laboratory C = Coursework X = Examinatio Exam Dur = Exam Duration W = GGPA Weighting (per CU) S/A/B = Summer Semester/Semester A/Semester B

English Language Requirement

* Normative 4-year degree and ASI students entering without Level 4 in HKDSE English Language or Grade D in HKALE AS Use of English are required to take EL0200A English for Academic Purposes 1 & EL0200B English for Academic Purposes 2 (EAP) of 6 credit units before progressing to GE1401 University English and GE2410 English for Engineering. Early exit arrangement is available that students achieving a grade B or above in their overall course results for EL0200A will be permitted to exit at this point and progress to the GE English courses.

The credits earned from the EAP course(s) will not be counted towards the minimum credit units required for graduation nor be calculated in students' CGPA. Students who are not admitted through JUPAS are invited upon enrolment to take the English Placement Test or to provide proof of alternative qualifications to be exempted from ELC course (http://www.cityu.edu.hk/elc/courses_exemption.html).

Chinese Language Requirement

@ Normative 4-year degree and Advanced Standing I students entering without Level 4 in HKDSE Chinese Language or Grade D in HKALE AS-level Chinese Language and Culture are required to take a 3-credit-unit course CHIN1001 University Chinese I. The credits earned will not be counted towards the minimum credit units required for graduation nor be calculated in students' CGPA.

^{**} Not necessary for Advanced Standing II students