![Nanyang Technological University Singapore logo]

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Computer Science and Engineering

3.5-year BEng (CE) Accelerated Bachelor Programme (ABP)
Applicable to students matriculated in 2019 or later

This accelerated programme is not applicable to polytechnic students with exemptions. Students under ABP have to do Professional Internship (PI).

Overview of AUs requirement

Year of Study		Core	Major Prescribed Elective (MPE)	General Education Requirement (GER)				Unrestricted Elective (UE)	Total
				Core	Prescribed Elective (PE)				
					BM	LA	STS		
1	Sem 1	14		3			3		20
	Sem 2	12		6				3	21
2	Sem 1	15		2				3	20
	Sem 2	9	3		3	3		3	21
3	Sem 1	10							10
	Sem 2	10	6	3				3	22
4	Sem 1	14	9					3	26
Total		**84**	**18**	14	3	3	3	**15**	**140**
				23					

Suggested Curriculum

Course Code and Title	Type (i.e. Core/ MPE/ GER core/ GER PE/ Unrestricted elective)	No of Hours Per Week				AU	Pre-requisite / Remarks
		Lec / TEL*	Tut	Lab/ Example class[+]	Total		
YEAR 1 SEMESTER 1							
CE1011 Engineering Mathematics I	Core	2	1	1[+]	4	3	-
CE1012 Engineering Mathematics II	Core	2	1	1[+]	4	3	CE1011 (can be taken concurrently)
CE1003 Introduction to Computational Thinking	Core	2*	0	2[+]	4	3	-
CE1013 Physics for Computing	Core	2	0	2	3	2	-
CE1005 Digital Logic	Core	2	1	1	4	3	-
Science & Technology	GER PE - STS	2	1	-	3	3	
HW0188^ Engineering Communication I	GER core	-	2	-	2	2	HW0001 (can be taken concurrently)

Course Code and Title	Type	Lec / TEL*	Tut	Lab/ Example class+	Total	AU	Pre-requisite / Remarks
GC0001 Sustainability: Seeing Through The Haze	GER core					1	online course
HW0001 Introduction to Academic Communication	GER core					0	
TOTAL		**10+2***	**6**	**3+4+**	**24**	**20**	

YEAR 1 SEMESTER 2							
CE1006 Computer Organisation and Architecture	Core	2	1	1	4	3	CE1005 (can be taken concurrently)
CE1007 Data Structures	Core	2	1	1	4	3	CE1003
MH1812 Discrete Mathematics	Core	2	1	1+	3	3	
CE2003 Digital Systems Design	Core	2	1	1	4	3	CE1005
CE0001 Engineers and Society#	GER core	2	1	-	3	3	
CE1015 Introduction to Data Science and Artificial Intelligence	GER core	2*	0	2	4	3	CE1003
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		**12+2***	**7**	**6+1+**	**26**	**21**	

^ Should there be insufficient vacancies, students will take Eng Comm I & II in the following semester.
# Available only in semester 2. Should there be insufficient vacancies, students will take Engrs and Society in the next semester 2.

Course Code and Title	Type (i.e. Core/ MPE/ GER core/ GER PE/ Unrestricted elective)	No of Hours Per Week				AU	Pre-requisite / Remarks
		Lec / TEL*	Tut	Lab/ Example class+	Total		
YEAR 2 SEMESTER 1							
CE2001 Algorithms	Core	2	1	1+	4	3	CE1007, CE1012, MH1812
CE2002 Object Oriented Design & Programming	Core	2	1	1	4	3	CE1007
CE2004 Circuits and Signal Analysis	Core	2	1	1	4	3	CE1012
CE2005 Operating Systems	Core	2	1	1	4	3	CE1006, CE1007
CE2007 Microprocessor-based Systems Design	Core	2	1	1	4	3	CE1006, CE2004 (can be taken concurrently)
HY0001 Ethics & Moral Reasoning	GER core					1	online course
ML0003 Kickstart your Career Success	GER core					1	online course
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		**12**	**6**	**4+1+**	**23**	**20**	

YEAR 2 SEMESTER 2							
CE2006 Software Engineering	Core	2	1	1	4	3	CE2002 (can be taken concurrently)
CE3001 Advanced Computer Architecture	Core	2	1	1^+	4	3	CE1006
CE3005 Computer Networks	Core	2	1	1	4	3	CE1011, CE1012
Technical Elective 1 (CZ200x or CZ300x)	MPE	2	1	1	4	3	
Liberal Arts	GER PE - LA	2	1	-	3	3	
Business & Management	GER PE - BM	2	1	-	3	3	
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		**14**	**7**	**3+1$^+$**	**25**	**21**	

Course Code and Title	**Type** *(i.e. Core/ Core elective/ GER core/ GER elective/ Unrestricted elective)*	**No of Hours Per Week**				**AU**	**Pre-requisite / Remarks**
		Lec	**Tut**	**Lab**	**Total**		
YEAR 3 SEMESTER 1							
CE3179 Professional Internship	Core	-	-	-	-	10	ML0003, Year 3 standing
TOTAL		-	-	-	-	**10**	
YEAR 3 SEMESTER 2							
CE4079 Final Year Project	Core	-	-	-	-	-	Final year standing
CE3003 Microcontroller Programming	Core	2	1	1	4	3	CE2005
CE3004 Multidisciplinary Design Project	Core	1	-	3	4	4	Year 3 standing
CE3007 Digital Signal Processing	Core	2	1	1	4	3	CE2004
CE4xxx Technical Elective 2	MPE	2	1	1	4	3	
CE4xxx Technical Elective 3	MPE	2	1	1	4	3	
ET0001 Enterprise & Innovation	GER core					1	online course
HW0288^ Engineering Communication II	GER core	-	2	-	2	2	HW0188, Year 3 standing
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		**11**	**7**	**7**	**25**	**22**	

YEAR 4 SEMESTER 1							
CE4079 Final Year Project	Core	-	-	-	-	8	
CE3002 Sensors, Interfacing and Control	Core	2	1	1	4	3	CE2004
CE3006 Digital Communications	Core	2	1	1	4	3	CE1011, CE2004
CE4xxx Technical Elective 4	MPE	2	1	1	4	3	
CE4xxx Technical Elective 5	MPE	2	1	1	4	3	
CE4xxx Technical Elective 6	MPE	2	1	1	4	3	
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		**12**	**6**	**5**	**23**	**26**	
GRAND TOTAL (Year 1 to 3.5)						140	

+ An additional 10 hours per semester have been allocated for these non-lab based courses for Example Classes. Faculty can use these time slots for their pedagogical needs such as to reinforce concepts, provide additional coaching, give more worked examples, allow students to do practice exercises or do research or work on the computers etc.