



**Curriculum Structure for  
BEng (CE) and BBus (with BA Specialisation) Double Degree Programme**  
*Applicable to students matriculated in 2019 and later*

This double degree programme is designed to be completed in 4 years with acceleration. Students can only do Professional Attachment under Nanyang Business School. There is no exemption granted to Polytechnic students.

**Overview of AUs requirement**

Year of Study	Core (CE)	Core (BUS)	Major Prescribed Elective (MPE) (CE)	Major Prescribed Elective (MPE) (BUS)	General Education Requirement (GER)			Unrestricted Elective (UE)	Total
					Core	Prescribed Elective (PE)			
						BM	LA		
1	14	7			1				22
	9	10			8				27
2	9	4		8					21
	9	3		4	4				20
3	12	3			1			3	19
	7			4	4				15
4	3	3	6	4			3		19
	11	4	3	4					22
<b>Total</b>	74	34	9	24	18		3	3	165
					21				

Accelerated 4-year Curriculum Structure for BEng (CE) and BBus (with BA Specialisation) Double Degree Programme

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 <sup>+</sup>	Total		
<b>YEAR 1 SEMESTER 1</b>							
CE1011 Engineering Mathematics I	Core (CE)	2	1	1 <sup>+</sup>	4	3	-
CE1012 Engineering Mathematics II	Core (CE)	2	1	1 <sup>+</sup>	4	3	CE1011 (can be taken concurrently)
CE1003 Introduction to Computational Thinking	Core (CE)	2*	0	2 <sup>+</sup>	4	3	-
CE1013 Physics for Computing	Core (CE)	2	0	2	3	2	-
MH1812 Discrete Mathematics	Core (CE)	2	1	1 <sup>+</sup>	4	3	-
AB1202 Statistical and Quantitative Methods	Core (Bus)	3	1	-	4	3	-



AB1301 Business Law	GER core	2	1	-	3	3	-
AB1001 Career Foundations	Core (Bus)	1	-	-	1	1	
GC0001 Sustainability: Seeing Through The Haze	GER core					1	online course
<b>TOTAL</b>		<b>14+2*</b>	<b>5</b>	<b>2+5+</b>	<b>27</b>	<b>22</b>	

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	Total		
<b>YEAR 1 SEMESTER 2</b>							
CE1005 Digital Logic	Core (CE)	2	1	1	4	3	
CE1006 Computer Organisation and Architecture	Core (CE)	2	1	1	4	3	CE1005 (can be taken concurrently)
CE1007 Data Structures	Core (CE)	2	1	1	4	3	CE1003
AD1101 Financial Accounting	Core (Bus)	3	1	-	4	4	
AB1601 Organisational Behaviour & Design	Core (Bus)	2	1	-	3	3	-
AB0601 Communication Management Fundamentals	GER core	2	-	-	2	2	-
CE1015 Introduction to Data Science and Artificial Intelligence	GER core	2*	0	2	4	3	CE1003
AB1002 Career Readiness	Core (Bus)	1	-	-	1	1	AB1001
<b>TOTAL</b>		<b>14+2*</b>	<b>5</b>	<b>5</b>	<b>26</b>	<b>22</b>	
<b>YEAR 1 SPECIAL SEMESTER</b>							
AB1003 Professional Attachment (Special Semester)	Core (Bus)	-	-	-	-	5	AB1002
<b>TOTAL</b>						<b>5</b>	
<b>YEAR 2 SEMESTER 1</b>							
CE2001 Algorithms	Core (CE)	2	1	1 <sup>+</sup>	4	3	MH1812, CE1012 CE1007
CE2002 Object Oriented Design and Programming	Core (CE)	2	1	1	4	3	CE1007
CE2004 Circuits and Signal Analysis	Core (CE)	2	1	1	4	3	CE1012
AD2101 Management Accounting	Core (Bus)	2	1	-	3	4	AD1101
BC2402 Designing & Developing Databases	MPE (Bus)	3	1	-	4	4	
BC2406 Analytics I: Visual and Predictive Analytics	MPE (Bus)	4	-	-	4	4	
<b>TOTAL</b>		<b>15</b>	<b>5</b>	<b>2+1<sup>+</sup></b>	<b>23</b>	<b>21</b>	



YEAR 2 SEMESTER 2							
CE2003 Digital Systems Design	Core (CE)	2	1	1	4	3	CE1005
CE2005 Operating Systems	Core (CE)	2	1	1	4	3	CE1006, CE1007
CE2006 Software Engineering	Core (CE)	2	1	1	4	3	CE2002 (can be taken concurrently)
AB1201 Financial Management	Core (Bus)	2	1	-	3	3	-
BC2407 Analytics II: Advanced Predictive Analytics	MPE (Bus)	4	-	-	4	4	
CE0001 Engineers & Society <sup>#</sup>	GER Core	2	1	-	3	3	
HY0001 Ethics & Moral Reasoning	GER core					1	online course
<b>TOTAL</b>		<b>14</b>	<b>5</b>	<b>3</b>	<b>22</b>	<b>20</b>	

<sup>#</sup> 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	Total		
<b>YEAR 3 SEMESTER 1</b>							
CE2007 Microprocessor-based Systems Design	Core (CE)	2	1	1	4	3	CE1006, CE2004 (can be taken concurrently)
CE3001 Advanced Computer Architecture	Core (CE)	2	1	1	4	3	CE1006
CE3002 Sensors, Interfacing and Control	Core (CE)	2	1	1	4	3	CE2004
CE3005 Computer Networks	Core (CE)	2	1	1	4	3	CE1011, CE1012
AB1501 Marketing	Core (Bus)	2	1	-	3	3	-
ET0001 Enterprise & Innovation	GER core					1	online course
Unrestricted elective	Unrestricted elective	2	1	-	3	3	Unrestricted elective
<b>TOTAL</b>		<b>12</b>	<b>6</b>	<b>4</b>	<b>22</b>	<b>19</b>	
<b>YEAR 3 SEMESTER 2</b>							
CE3003 Microcontroller Programming	Core (CE)	2	1	1	4	3	CE2005
CE3004 Multidisciplinary Design Project	Core (CE)	1	-	3	4	4	Year 3 standing
AB0602 Communication Management Strategy	GER (Core)	3	1	-	4	4	AB0601
BCxxxx Business/CS Integration 1	MPE (Bus)	3	1	-	4	4	
<b>TOTAL</b>		<b>9</b>	<b>3</b>	<b>4</b>	<b>16</b>	<b>15</b>	



YEAR 4 SEMESTER 1							
CE4079 Final Year Project	Core (CE)	-	-	-	-	-	Final year standing
CE3006 Digital Communications	Core (CE)	2	1	1	4	3	CE1011, CE2004
CE4xxx Technical Elective 1	MPE (CE)	2	1	-	3	3	
CE4xxx Technical Elective 2	MPE (CE)	2	1	-	3	3	
HE5091 Principles of Economics	Core (Bus)	2	1	-	3	3	
BCxxxx Business/CS Integration 2	MPE (Bus)	3	1	-	4	4	
Science & Technology	GER PE - STS	2	1	-	3	3	
<b>TOTAL</b>		<b>13</b>	<b>6</b>	<b>1</b>	<b>20</b>	<b>19</b>	

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	Tut	Lab	Total		
<b>YEAR 4 SEMESTER 2</b>							
CE3007 Digital Signal Processing	Core (CE)	2	1	1	4	3	CE2004
CE4079 Final Year Project	Core (CE)	-	-	-	-	8	
CE4xxx Technical Elective 3	MPE (CE)	2	1	-	3	3	
BCxxxx Business/CS Integration 3	MPE (Bus)	3	1	-	4	4	
AB3601 Strategic Management	Core (Bus)	3	1	-	4	4	AB1501, AB1601
<b>TOTAL</b>		<b>10</b>	<b>4</b>	<b>1</b>	<b>15</b>	<b>22</b>	
<b>GRAND TOTAL (Year 1 to 4)</b>						<b>165</b>	

\*Instead of normal tutorial/laboratory classes, Faculty can use Example Class for their pedagogical needs such as group discussion team based learning (TBL), seminar to review and reinforce concepts, provide additional coaching, give more worked examples, allow students to do practice exercises or do research or work on the computers etc.

**BCxxxx Business/CS Integration Courses\***  
(Students to choose any 3 courses)

\*As of 13 July 2020

- BT2403 Service Operations Management
- BC2408 Supply Chain Analytics
- BC3402 Financial Service Processes and Analytics
- BC3405 Lean Operations & Analytics
- BC3406 Business Analytics Consulting
- BC3408 Decision Modelling & Analytics
- BC3409 AI in Accounting and Finance