

**Curriculum Structure for
BEng (CS) and BBus (with BA Specialisation) Double Degree Programme**
Applicable to students matriculated in 2019 or 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 (CS)	Core (BUS)	Major Prescribed Elective (MPE) (CS)	Major Prescribed Elective (MPE) (BUS)	General Education Requirement (GER)				Unrestricted Elective (UE)	Total
					Core	Prescribed Elective (PE)				
						BM	LA	STS		
1	14	7			1					22
	9	10			8					27
2	9	4		8						21
	9	3		4	4					20
3	9	3			1				6	19
	7			4	4					15
4	3	3	6	4				3		19
	11	4	3	4						22
Total	71	34	9	24	18			3	6	165
					21					

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

Course Code and Title	Type <i>(i.e. Core/ MPE/ GER core/ GER PE/ Unrestricted elective)</i>	No of Hours Per Week				AU	Pre-requisite / Remarks
		Lec / TEL*	Tut	Lab/ Example class ⁺	Total		
YEAR 1 SEMESTER 1							
CZ1011 Engineering Mathematics I	Core (CS)	2	1	1 ⁺	4	3	-
CZ1012 Engineering Mathematics II	Core (CS)	2	1	1 ⁺	4	3	CZ1011 (can be taken concurrently)
CZ1003 Introduction to Computational Thinking	Core (CS)	2*	0	2 ⁺	4	3	-
CZ1013 Physics for Computing	Core (CS)	2	0	2	3	2	-



MH1812 Discrete Mathematics	Core (CS)	2	1	1 ⁺	4	3	-
AB1202 Statistical and Quantitative Methods	Core (Bus)	3	1	-	4	3	-
AB1601 Organisation Behaviour and Design	Core (Bus)	2	1	-	3	3	-
AB1001 Career Foundations	Core (Bus)	1	-	-	1	1	
GC0001 Sustainability: Seeing Through The Haze	GER core					1	online course
TOTAL		14+2*	5	2+5⁺	27	22	

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 2							
CZ1005 Digital Logic	Core (CS)	2	1	1	4	3	
CZ1006 Computer Organisation and Architecture	Core (CS)	2	1	1	4	3	CZ1005 (can be taken concurrently)
CZ1007 Data Structures	Core (CS)	2	1	1	4	3	CZ1003
AD1101 Financial Accounting	Core (Bus)	3	1	-	4	4	
AB1301 Business Law	GER core	2	1	-	3	3	-
AB0601 Communication Management Fundamentals	GER core	2	-	-	2	2	-
CZ1015 Introduction to Data Science and Artificial Intelligence	GER core	2*	0	2	4	3	CZ1003
AB1002 Career Readiness	Core (Bus)	1	-	-	1	1	AB1001
TOTAL		14+2*	5	5	26	22	
YEAR 1 SPECIAL SEMESTER							
AB1003 Professional Attachment (Special Semester)	Core (Bus)	-	-	-	-	5	AB1002
TOTAL						5	
YEAR 2 SEMESTER 1							
CZ2001 Algorithms	Core (CS)	2	1	1 ⁺	4	3	MH1812, CZ1012 CZ1007
CZ2002 Object Oriented Design and Programming	Core (CS)	2	1	1	4	3	CZ1007
CZ2003 Computer Graphics and Visualisation	Core (CS)	2	1	1	4	3	CZ1011



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	
TOTAL		15	5	2+1⁺	23	21	

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		
YEAR 2 SEMESTER 2							
CZ2004 Human Computer Interaction	Core (CS)	2	1	1	4	3	-
CZ2005 Operating Systems	Core (CS)	2	1	1	4	3	CZ1006, CZ1007
CZ2006 Software Engineering	Core (CS)	2	1	1	4	3	CZ2002 (can be taken concurrently)
AB1201 Financial Management	Core (Bus)	2	1	-	3	3	-
BC2407 Analytics II: Advanced Predictive Analytics	MPE (Bus)	4	-	-	4	4	
CZ0001 Engineers & Society [#]	GER Core	2	1	-	3	3	
HY0001 Ethics & Moral Reasoning	GER core					1	online course
TOTAL		14	5	3	22	20	
YEAR 3 SEMESTER 1							
CZ3001 Advanced Computer Architecture	Core (CS)	2	1	1	4	3	CZ1006
CZ3002 Advanced Software Engineering	Core (CS)	2	1	1	4	3	CZ2006
CZ3003 Software Systems Analysis and Design	Core (CS)	2	1	1	4	3	CZ2006 (can be taken concurrently)
AB1501 Marketing	Core (Bus)	2	1	-	3	3	-
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
ET0001 Enterprise & Innovation	GER core					1	online course
TOTAL		12	6	3	21	19	

[#] 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	Tut	Lab	Total		
YEAR 3 SEMESTER 2							
CZ3004 Multidisciplinary Design Project	Core (CS)	1	-	3	4	4	Year 3 standing
CZ3005 Artificial Intelligence	Core (CS)	2	1	1	4	3	CZ1003, CZ2001
AB0602 Communication Management Strategy	GER (Core)	3	1	-	4	4	AB0601
BCxxxx Business/CS Integration 1	MPE (Bus)	3	1	-	4	4	
TOTAL		9	3	4	16	15	
YEAR 4 SEMESTER 1							
CZ4079 Final Year Project	Core (CS)	-	-	-	-	-	Final year standing
CZ3006 Net Centric Computing	Core (CS)	2	1	1	4	3	CZ1006, CZ2002
CZ4xxx Technical Elective 1	MPE (CS)	2	1	-	3	3	
CZ4xxx Technical Elective 2	MPE (CS)	2	1	-	3	3	
HE9091 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	
TOTAL		13	6	1	20	19	



School of Computer Science and Engineering							
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		
YEAR 4 SEMESTER 2							
CZ4079 Final Year Project	Core (CS)	-	-	-	-	8	
CZ3007 Compiler Techniques	Core (CS)	2	1	1	4	3	CZ2001, CZ2006
CZ4xxx Technical Elective 3	MPE (CS)	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
TOTAL		10	4	1	15	22	
GRAND TOTAL (Year 1 to 4)						165	

*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