

3.5-year BEng (CS) Accelerated Bachelor Programme (ABP)

Applicable to students matriculated in 2018 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	11		3				3	17
	Sem 2	15		6					21
2	Sem 1	15		1		3	3		22
	Sem 2	12	3	1	3			3	22
3	Sem 1	10							10
	Sem 2	7	6	3				6	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							
MH1812 Discrete Mathematics	Core	2	1	1 ⁺	4	3	-
CZ1003 Introduction to Computational Thinking	Core	2 [*]	0	2 ⁺	4	3	-
CZ1013 Physics for Computing	Core	2	0	2	3	2	-
CZ1005 Digital Logic	Core	2	1	1	4	3	-
HW0188 [^] Engineering Communication I	GER core	-	2	-	2	2	HW0001 (can be taken concurrently)
GC0001 Sustainability: Seeing Through The Haze	GER core					1	online course
HW0001 English Proficiency	GER core					0	
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		8+2[*]	5	3+3⁺	20	17	

YEAR 1 SEMESTER 2								
CZ1011 Engineering Mathematics I	Core	2	1	1 ⁺	4	3	-	
CZ1012 Engineering Mathematics II	Core	2	1	1 ⁺	4	3	CZ1011 (can be taken concurrently)	
CZ1006 Computer Organisation and Architecture	Core	2	1	1	4	3	CZ1005 (can be taken concurrently)	
CZ1007 Data Structures	Core	2	1	1	4	3	CZ1003	
CZ2004 Human Computer Interaction	Core	2	1	1	4	3	-	
CZ0001 Engineers and Society [#]	GER core	2	1	-	3	3		
CZ1015 Introduction to Data Science and Artificial Intelligence	GER core	2*	0	2	4	3		
TOTAL		12+2*	6	5+2⁺	27	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/ Core elective/ GER core/ GER elective/ Unrestricted elective)	No of Hours Per Week				AU	Pre-requisite / Remarks
		Lec / TEL*	Tut	Lab/ Example class ⁺	Total		
YEAR 2 SEMESTER 1							
CZ2001 Algorithms	Core	2	1	1 ⁺	4	3	CZ1007, CZ1012, MH1812
CZ2002 Object Oriented Design & Programming	Core	2	1	1	4	3	CZ1007
CZ2005 Operating Systems	Core	2	1	1	4	3	CZ1006, CZ1007
CZ2007 Introduction to Databases	Core	2	1	1	4	3	CZ2001 (can be taken concurrently)
CZ3001 Advanced Computer Architecture	Core	2	1	1	4	3	CZ1006
HY0001 Ethics & Moral Reasoning	GER core					1	online course
Science & Technology	GER PE - STS	2	1	1	4	3	
Liberal Arts	GER PE - LA	2	1	-	3	3	
TOTAL		14	7	5+1⁺	27	22	
YEAR 2 SEMESTER 2							
CZ2003 Computer Graphics and Visualisation	Core	2	1	1	4	3	CZ1011



CZ2006 Software Engineering	Core	2	1	1	4	3	CZ2002 (can be taken concurrently)
CZ3003 Software Systems Analysis and Design	Core	2	1	1 ⁺	4	3	CZ2006 (can be taken concurrently)
CZ3006 Net Centric Computing	Core	2	1	1	4	3	CZ1006, CZ2002
Technical Elective 1 (CE200x or CE300x)	MPE	2	1	1	4	3	
Business & Management	GER PE - BM	2	1	-	3	3	
ML0003 Professional Development Course	GER core					1	online course
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		14	7	4+1⁺	26	22	

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							
CZ3179 Professional Internship	Core	-	-	-	-	10	ML0003, Year 3 standing
TOTAL		-	-	-	-	10	
YEAR 3 SEMESTER 2							
CZ4079 Final Year Project	Core	-	-	-	-		Final year standing
CZ3002 Advanced Software Engineering	Core	2	1	1	4	3	CZ2006
CZ3004 Multidisciplinary Design Project	Core	1	-	3	4	4	Year 3 standing
CZ4xxx Technical Elective 2	MPE	2	1	1	4	3	
CZ4xxx Technical Elective 3	MPE	2	1	1	4	3	
HW0288 Engineering Communication II	GER core	-	2	-	2	2	HW0188, Year 3 standing
ET0001 Enterprise & Innovation	GER core					1	online course
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
Unrestricted elective	Unrestricted elective	2	1	-	3	3	
TOTAL		11	7	6	24	22	



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 4 SEMESTER 1							
CZ4079 Final Year Project	Core	-	-	-	-	8	
CZ3005 Artificial Intelligence	Core	2	1	1	4	3	CZ1003, CZ2001
CZ3007 Compiler Techniques	Core	2	1	1	4	3	CZ2001, CZ2006
CZ4xxx Technical Elective 4	MPE	2	1	1	4	3	
CZ4xxx Technical Elective 5	MPE	2	1	1	4	3	
CZ4xxx 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	

*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.