

AY2025-2026
CURRICULUM FOR COMPUTER ENGINEERING

Exempted Polytechnic Students (PI and PA option)

PI option : 20-WEEK Professional Internship

SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Core	MPE	ICC			BDE	Total AU
			Common - Core	Professional Series	Care, Serve, Learn		
Y1	26	0	6	3	0	0	35
Y2	28	0	8	0	3	0	39
Y3	7	9	0	12	0	0	28
Y4	4	9	0	1	0	0	14
Total	65	18	14	16	3	0	116

Recommended Course Schedule

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1003	Introduction to Computational Thinking & Programming	P-Series	3	Nil
SC1004	Linear Algebra for Computing	Core	4	SC1003 (co-req)
SC1005	Digital Logic	Core	3	Nil
SC1013	Physics For Computing	Core	2	Nil
EG1001	Engineers in Society	Core	2	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
HW0001	Introduction to Academic Communication	-	-	For student failed QET
HW0002	Calculus	-	-	For student not done Calculus
TOTAL			18	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1006	Computer Organisation & Architecture	Core	3	SC1005 (co-req)
SC1007	Data Structures & Algorithms	Core	3	SC1003
SC1008	C and C++ Programming	Core	3	SC1003
SC2000	Probability & Statistics for Computing	Core	3	Nil
MH1812	Discrete Mathematics	Core	3	Nil
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
			17	
			Year 1 Total AU	35

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
SC2006	Software Engineering	Core	3	SC2002 (co-req)
SC2008	Computer Network	Core	3	SC2000 & SC1004
SC2107	Microprocessor System Design and Development	Core	3	SC1006
CC0007	Science & Technology for Humanity	C-Core	3	Nil
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
TOTAL			20	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2103	Digital Systems Design	Core	3	SC1005
SC2005	Operating Systems	Core	3	SC1006 & SC1007
SC2104	Sensors, Interfacing & Digital Control	Core	3	SC1006
SC2079	Multidisciplinary Design Project	Core	4	Year 3 Standing
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
CSL	CSL (service learning course) - Part 1	CSL	3	(Continue in Y3S2)
TOTAL			19	
			Year 2 Total AU	39

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3920	Professional Internship (Graded)	P-Series	10	Year 3 Standing
CSL	CSL (service learning course) - Part 2	CSL	-	(Continue from Y2S2)
TOTAL			10	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3102	Signals, Systems and Transforms	Core	3	SC1004
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-1	3	Refer to MPE listing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-2	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-3	3	Year 3 Standing
HW0288	Engineering Communication	P-Series	2	CC0001 & Year 3 standing
TOTAL			18	
Year 3 Total AU			28	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-4	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-5	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-6	3	Refer to MPE listing
ML0015	Profession Preparation	P-Series	1	Nil
TOTAL			14	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
TOTAL			0	
Year 4 Total AU			14	
Grand Total (Year 1 to 4)			116	

Important Note:

- Students are required to complete 6 **Major Prescribed Electives (MPE)** courses, of which **at least 4 must be at the SC4xxx level**.
- In order to graduate with **Highest Distinction**, students must achieve **minimum CGPA of 4.5** and at least a **'B+' grade** for the **Final Year Project**.

MPE Structure of Computer Engineering (U24 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE-1	3	Any MPE
SC3xxx/SC4xxx	MPE-2	3	Any MPE
SC4xxx	MPE-3	3	Choose within SC4xxx
SC4xxx	MPE-4	3	Choose within SC4xxx
SC4xxx	MPE-5	3	Choose within SC4xxx
SC4xxx	MPE-6	3	Choose within SC4xxx
	Total	18	
Please refer to the CE MPE Courses and Elective Focus Areas on CCDS website.			

AY2025-2026
CURRICULUM FOR COMPUTER ENGINEERING

Exempted Polytechnic Students (PI and PA option)

PA option : 10-WEEK Professional Attachment (Graded)

SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Core	MPE	ICC			BDE	Total AU
			Common - Core	P-Series	Care, Serve, Learn		
Y1	26	0	6	3	0	0	35
Y2	28	0	8	5	3	0	44
Y3	11	18	0	3	0	5	37
Total	65	18	14	11	3	5	116

Recommended Course Schedule

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1003	Introduction to Computational Thinking & Programming	P-Series	3	Nil
SC1004	Linear Algebra for Computing	Core	4	SC1003 (co-req)
SC1005	Digital Logic	Core	3	Nil
SC1013	Physics For Computing	Core	2	Nil
EG1001	Engineers in Society	Core	2	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
HW0001	Introduction to Academic Communication	-	-	For student failed QET
HW0002	Calculus	-	-	For student not done Calculus
TOTAL			18	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1006	Computer Organisation & Architecture	Core	3	SC1005 (co-req)
SC1007	Data Structures & Algorithms	Core	3	SC1003
SC1008	C and C++ Programming	Core	3	SC1003
SC2000	Probability & Statistics for Computing	Core	3	Nil
MH1812	Discrete Mathematics	Core	3	Nil
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
TOTAL			17	
Year 1 Total AU			35	

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
SC2006	Software Engineering	Core	3	SC2002 (co-req)
SC2008	Computer Network	Core	3	SC2000 & SC1004
SC2107	Microprocessor System Design and Development	Core	3	SC1006
CC0007	Science & Technology for Humanity	C-Core	3	Nil
TOTAL			18	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2103	Digital Systems Design	Core	3	SC1005
SC2005	Operating Systems	Core	3	SC1006 & SC1007
SC2104	Sensors, Interfacing & Digital Control	Core	3	SC1006
SC2079	Multidisciplinary Design Project	Core	4	Year 3 Standing
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
CSL	CSL (service learning course) - Part 1	CSL	3	(Continue in Y3S1)
TOTAL			21	

YEAR 2 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3910	Professional Attachment (Graded)	P-Series	5	Year 3 Standing
TOTAL			5	
		Year 2 Total AU	44	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3102	Signals, Systems and Transforms	Core	3	SC1004
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
HW0288	Engineering Communication	P-Series	2	CC0001 & Year 3 standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-1	3	Refer to MPE listing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-2	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-3	3	Refer to MPE listing
CSL	CSL (service learning course) - Part 2	CSL	-	(Continue from Y2S2)
TOTAL			18	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-4	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-5	3	Refer to MPE listing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-6	3	Refer to MPE listing
ML0015	Profession Preparation	P-Series	1	Nil
	Broadening and Deepening Elective	BDE	3	Refer to Class Schedule
	Broadening and Deepening Elective	BDE	2	Refer to Class Schedule
TOTAL			19	
		Year 3 Total AU	37	
Grand Total (Year 1 to 4)			116	

Important Note:

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- In order to graduate with Highest Distinction, students must achieve minimum CGPA of 4.5 and at least a 'B+' grade for the Final Year Project.

MPE Structure of Computer Engineering (U24 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE-1	3	Any MPE
SC3xxx/SC4xxx	MPE-2	3	Any MPE
SC4xxx	MPE-3	3	Choose within SC4xxx
SC4xxx	MPE-4	3	Choose within SC4xxx
SC4xxx	MPE-5	3	Choose within SC4xxx
SC4xxx	MPE-6	3	Choose within SC4xxx
	Total	18	
Please refer to the CE MPE Courses and Elective Focus Areas on CCDS website.			